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SIERRA CLUB BULLETIN

FEBRUARY • 1935



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SIERRA CLUB BULLETIN

VOLUME XX

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NUMBER I

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SIERRA CLUB BULLETIN

VOLUME XX

NUMBER I



FEBRUARY, 1935

SKI HEIL!

BY JOEL H. HILDEBRAND

CARTOONS BY MILTON HILDEBRAND

THE Sierra Club is in the process of making a number of notable discoveries: that its beloved Sierra is the *Sierra Nevada*, or snowy range, and must be sought by devoted pilgrims not only in July, but also in January, to be known in the fullness of its glory; that winter at high altitudes is not bitter, but is warm and friendly, for the thin air easily transmits the radiance of the sun to bare brown backs; that twelve feet of snow affords a smoother path than even a national park trail, and runs anywhere you wish to go; that the purple shadows of the trees and the pure rose of the alpenglow are colors as rich as those of columbine and heather; that the smooth folds of sparkling virgin snow, the glitter of icicles, and the living green of firs showing beneath their heavy white mantles—all constitute an enchanted world which can be entered by the magic of the ski.

The delighted few who first made these discoveries have spread the gospel, for one simply cannot help telling it to others, till the converts are gathering like the children who followed the Pied Piper. They will disappear into the moun-



tain, too, but not permanently, for each will quickly emerge, laugh and be laughed at, brush off the snow and try again.

The southern members have been fortunate in having a mountain lodge, the Harwood Lodge, situated amid the snow and accessible for winter use; but the Parsons Lodge, at Tuolumne Meadows, is practically inaccessible in winter, and the northern devotees have been homeless wanderers, sponging on the hospitable Auburn Ski Club, renting Boy Scout camps, or sleeping like tramps in the abandoned railroad-station at Soda Springs. Nothing daunted by difficulties, in February, 1934, a couple of dozen enthusiasts hired a bus for a two-day trip to Soda Springs and Norden. It cost only \$3.50 each for the round trip of three hundred eighty miles, and the food cost so little that the whole trip was almost cheaper than staying at home. There were two fine days of skiing; but the historical event was the trip home. No one slept, for there was too much to talk about; skiing technique, waxes, boots, equipment, all afford as much conversational material to the skier as do rods, flies, and the size of fish to the angler. The most serious question, however, was where to spend the night on future trips. The obvious answer was a ski-lodge, owned and operated by the Sierra Club, and the Clair Tappaan Memorial Lodge then and there became an air-castle. Architect Walter Ratcliff was one of the party, and offered his services to pull the air-castle down a little below the clouds where we could see it. He had already designed one ski-lodge (the Sierra Ski Club at Norden), and knew how to do it. A subscription list was started. Bestor Robinson, chairman of the Winter Sports Committee, was there and got the idea with a bang, and when he sets out to accomplish anything all obstacles just fade away. He managed to

get some hooks onto that air-castle as soon as Walter Ratcliff drew it and pulled so hard it just had to come down to earth.

The location was carefully considered, and every argument pointed to Norden. It is on the main line of the Southern Pacific; it is on the Lincoln Highway, which is kept open all winter; it

boasts of a post-office, a store, and a public garage. It lies at an



altitude of 7000 feet and has one of the heaviest packs of snow in the United States; twelve feet is normal in February and twenty-seven feet is on record—plenty to fall in.

Norden is only a mile west of the main crest of the Sierra Nevada. Ideal skiing slopes lie in every direction. Four miles to the north stands Castle Peak, a massive, palisaded mountain 9140 feet high, and three miles to the south is Mount Lincoln, 8400 feet, whose north side encloses the "Sugar Bowl," a smooth, shaded cirque surmounted by fine pinnacles and collecting enough snow to last through June. The forest is open, and there are many slopes, with but few obstacles to fast running. A magnificent course with a thousand-foot drop in altitude has been discovered, down the slopes of Mount Lincoln. Two of our skiers ran it in five and a half minutes last March in untracked snow. Horace Breed had already acquired a lease from the United States Forest Service on an ideal location in this vicinity, and with the enthusiastic coöperation characteristic of Sierra Club members offered to transfer it to the club. The Forest Service consented, and also gave permission to fell the trees needed for construction. Subscriptions came pouring in; the directors of the Sierra Club caught the enthusiasm and voted money from the treasury; the Southern California Chapter donated the fireplace and hood, the San Francisco Bay Chapter the plumbing and stoves; "benefits" were held, and the fund continued to grow. Lewis Clark rounded up workers and girls to cook for them, and every week-end all the spring and summer groups of ardent, if sometimes unskilled, workmen might be seen digging, chopping, sawing, pounding, and—yes, eating. Some workers spent their entire vacations on the job. Joe Staudinger, master workman at all crafts, deserves honorable mention.

The lodge is now a reality, awaiting only a permanent roof, to be added next summer, to be called finished, and enough members have signed up for the Christmas vacation—this is written November first—to fill up two or three such lodges. It will not stand idle.

Eventually the club should have several outlying small shelter-huts, where fuel and blankets would be available for more extended tours. Just give us time—and money!

Sufficient skiing proficiency to take full advantage of these fa-



cilities is rapidly being developed among our members. We have set standards by adopting the official tests of the British Ski Club. These comprise three classes: the first-class badge is given only to the very few who win first-class international races. We are not likely at present to go in for that sort of skiing. The second-class test is very severe, including, for example, a drop in altitude of 1000 feet over a standard course in not over four minutes, which is pretty swift going, and not all straight, either. The writer, who is a judge, has his eye on a few promising candidates, and one may expect to see several second-class badges strutting about by the end of the season. The third-class badge guarantees a rather good skier, well equipped for all ordinary touring. To earn it one must demonstrate climbing ability and stamina, telemarks, christianias, and continuous stem-turns on a gradient of 15 degrees, and run down a standard 1000-foot course within a fixed time limit, usually about seven minutes, but varying with snow conditions. Eight persons passed this test last winter. We have thought it well to encourage beginners by establishing a fourth-class test, designed to demonstrate ability to join in an easy tour without likelihood of having to be carried home. The fourth-class skier must ascend and descend 500 feet within specified time limits. He must demonstrate kick-turns, four successive stem-turns, a snow-plow to a stand-still and a short, straight run. Forty have passed this test.

It should be the ambition of everyone to pass at least the third-class test. The satisfactions of skiing confidently under control are very great. Do not emulate those who go wildly down a steep slope,

out of control, waving arms and legs madly, holding poles so that a fall threatens impalement, only to crash to a mass of wreckage long before reaching the bottom.

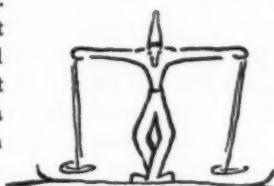
No one who can use his legs should fear to try skiing. The first couple of days are very awkward, for one's natural reflexes are of little use and a new set must be acquired; but this need not take long, and it begins to be fun very soon. It is fun for those who watch you, right from



the start. There are now a number of members who will be willing and able to help the novice. There are several helpful books.¹ A great deal can be learned from a motion-picture designed particularly for instruction purposes, entitled "In a Glistening Paradise," which can be rented from the Extension Division of the University of California.



The first problem for one wishing to learn the charm of winter in the mountains is equipment. The novice should consult someone who really knows, not some salesman who has never been on skis. The books here recommended give good advice. I have seen people trying to learn on skis a foot too long, with soft moccasin-toed boots that wobble about in the bindings so that the skis cannot possibly be guided. It cannot be done in that way. One simply must have proper boots and bindings, with skis of the right length. It will pay, in the long run, to buy real ski-boots, with stout soles and square, hard toes. They are not cheap, but will last a lifetime, and the satisfaction one gets from them will justify cutting down on some expensive vice in order to own a pair. They should be big enough to permit two pairs of heavy wool socks and still allow you to wiggle your toes. Do not drench them with oil, but wax them a couple of times a season. Keep them on lasts when not in use.



The skis should be of ash or, better, hickory, and not longer than from the floor to the palm of the up-stretched hand. The grain should be either vertical or else strictly horizontal throughout. Bindings should fit the boot perfectly, permitting no side-play of the heel, but allowing it to be lifted freely far enough to kneel on the ski. Bindings with toe-straps are easier on the boots and far more practical than those which clamp the soles. Try to find a salesman who has been on skis himself, and is interested in helping you to be a successful, and hence permanent, customer. This degree of enlightenment is rare, but it exists.

You will need a pair of ski-sticks, also canvas mittens and woolen

¹ The following are particularly recommended: "On Skis over the Mountains," by Dr. Walter Mosauer; The Cloister Press, Hollywood; price, 50 cents. "Modern Ski Technique," by Otto Schniebs and J. W. McCrillis; The Stephen Daye Press, Brattleboro, Vt.; price, \$1.25. "The Art of Skiing," by Chas. N. Proctor; Harcourt, Brace & Co., New York; price, \$2.00. "Der Skilauf" (in German); Winkler, Lindauer, Munich.

mittens to wear under them when the sun does not shine. Provide yourself with four kinds of ski-wax—for cold dry snow, for wet snow, for crust, and for "corn-snow," which is coarsely granular spring-snow. The purpose of wax is to enable one to slide down-hill freely without sticking, and yet to climb up-hill with sufficient sticking to prevent back-slip. The extent to which these contradictory aims can be achieved is indeed remarkable. A small cake of paraffin is useful if the other waxes have not prevented the adherence of snow to the skis.



Trousers may be either knee-breeches or long trousers, of the Norwegian type, tied at the ankle. Riding trousers do not allow enough knee-room. In either case they should be of wool, closely knit, with smooth finish. Light waterproofing is advisable. Do not bundle yourself in heavy underwear, for skiing is often hot work. Wear a light flannel shirt and depend on sweater and wind-jacket, carried along in your rucksack, for protection against cold on an exposed ridge or in the late afternoon. Your cap or hat should furnish generous protection against the sun; but provide yourself in addition with goggles and theatrical grease-paint. This last is far superior in effectiveness and sticking quality to other face-dopes. The burning power of sunlight in snow at 8000 feet in March cannot be overestimated.

Always take your rucksack if you are going more than a mile from the lodge. Put into it your sweater, wind-jacket, woolen mittens, wax, a couple of straps, lunch, a can of tomato-juice, first-aid for yourself and skis, flashlight, *and matches*. An aluminum ski-tip may prevent your being marooned miles from home.

Never go off alone. An accident which may be only a minor one to a member of a party becomes a major one to a lone skier. Each

party should have a responsible leader and a rounder-up, and noses should be counted at intervals. Do not court danger; if not for your own sake, at least as a courtesy to others, for injury

to either you or your skis makes you a nuisance. Learn something about avalanches, and avoid a possible avalanche slope as you would the plague. Every slope of 25 degrees or more is dangerous after a



new fall of powder snow; also when the snow is very wet.

Do not, however, allow yourself to be deterred by the dangers of skiing. These can be minimized by knowledge and judgment so that they are no more serious than the hazards of motoring, which deter no one.

I would urge our ardent mountain climbers to restrain their ambitions to climb peaks in winter till they have learned to ski. One should be ashamed to make a long descent by "sitzmarking" at every turn when it should be possible to run down under control in a beautiful series of christianias or telemarks. To one who has learned to ski, it is this, not the mountain-peak, that is the greater glory.

* * *

The winter greeting in the Alps is "Ski-heil!" *Heil* means health and happiness; it means long life and good luck; it means wholesomeness. The ski-runner knows that only on skis can these be realized in their fullness. Come to the mountains! To the Sierra Nevada, where the air is crisp and the sun is bright, where the only depressions are those that one takes with a flourish and whoop! Strap on your skis and shout with us, "Ski-heil"!



SNOW-SHOE THOMPSON PIONEER SKIER OF THE SIERRA NEVADA



[Nowhere in the annals of skiing is there a more remarkable figure than "Snow-Shoe" Thompson, who carried the mails across the Sierra every winter from 1856 to 1876. His exploits have been described in newspapers and magazines from time to time, but practically nothing of importance has been added to the information contained in two of the earlier articles—*Hutchings' Magazine* for February, 1857, and *Overland Monthly* for October, 1886. The earlier article, the authorship of which is not stated, is here reprinted verbatim, with the exception of one irrelevant paragraph. The *Overland* article is too long to be reprinted in full on the present occasion, but the passages selected contain most of the information that is of interest to present-day skiers. The material for the *Overland* article was obtained by the author, Dan De Quille [William Wright] while he was on the staff of the *Territorial Enterprise* at Virginia City, Nevada, in 1876. "A day or two since," he says, "I met in this city and had the pleasure of a long conversation with the most wonderful living mountaineer on the Pacific Coast, and perhaps in the world, John A. Thompson, better known as 'Snow-Shoe Thompson.'" (*Daily Alta California*, San Francisco, February 20, 1876, reprinted from the *Territorial Enterprise*.) It was a very fortunate thing that Dan De Quille obtained Thompson's story at this time, for had he not, much of it would have been lost, as Thompson died only a few months later. At his grave, in the cemetery of the little town of Genoa, in the Carson Valley, Nevada, there still stands the white stone carved with crossed skis—a device probably unique for this purpose. The spelling, THOMPSON, on the grave-stone is doubtless, the correct form of the family name, but the spelling, THOMPSON, is used in almost every article that has been written about him and has come to be identified with him.—EDITOR.]

"SNOW-SHOE THOMPSON"*

By DAN DE QUIILLE

JOHN A. THOMPSON, the man to whom the people of the Pacific Coast gave the name of "Snow-shoe Thompson," was born at Upper Tins, Prestijeld, Norway, April 30, 1827; and died at his ranch in Diamond Valley, at the head of Carson Valley, thirty miles south of Carson City, Nevada, May 15, 1876, after an illness of but a few days.

Mr. Thompson was a man of splendid physique, standing six feet in his stockings, and weighing 180 pounds. His features were large,

* Reprinted, with omissions, from *Overland Monthly*, vol. viii (Second Series), October, 1886, pp. 419-435.

but regular and handsome. He had the blonde hair and beard, and fair skin and blue eyes of his Scandinavian ancestors; and looked a true descendant of the sea-roving Northmen of old. Although he spoke English as well as a native-born American, one would not have been much surprised to have heard him break forth in the old Norse. Had he lived in the days when his ancestors were carrying terror to all the coasts of Europe, he would have been a leader, if not a king, among them. On the sea he would have been what he was in the mountains—a man most adventurous, fearless, and unconquerable.

At the age of forty-nine years, he seemed in the very prime of life. His eye was bright as that of a hawk, his cheeks were ruddy, his frame muscular, and his *tout ensemble* that of a hardy mountaineer, ready to take the field, and face the dangers of the wilderness and the elements, at a moment's notice. His face wore that look of repose, and he had that calmness of manner, which are the result of perfect self-reliance, and a feeling of confidence in the possession of the powers to conquer.

In the year 1837, when ten years of age, Thompson left his native land, and with his father and family came to the United States. The family made Illinois their first halting place, but in 1838 they left that state, and went to Missouri. In 1841, the family left Missouri, and went to Iowa, where they remained until 1845, when they returned to Illinois.

In 1851, Mr. Thompson, then twenty-four years of age, was smitten with the "gold fever," and came across the plains to California. He landed at Hangtown, now known as Placerville, and for a time mined at Coon Hollow and Kelsey's Diggings. He presently became dissatisfied with the life and luck of a miner, and concluded to try the valleys. He went to Putah Creek, Sacramento Valley, and set up as a ranchman. He lived on his ranch during the years 1854-'55, but his eyes were constantly turned eastward toward the mountains—toward where the snowy peaks glittered against the deep blue sky.

Early in the winter of 1856, while still at work on his Putah Creek ranch, Mr. Thompson read in the papers of the trouble experienced in getting the mails across the snowy summit of the Sierra Nevada Mountains [*sic*]. At the time he was engaged in cutting wood on his ranch. What he heard and read of the difficulties encountered

in the mountains, on account of the great depth of the snow, set him to thinking. When he was a boy, in Norway, snow-shoes were objects as familiar to him as ordinary shoes are to the children of other lands. He determined to make a pair of snow-shoes out of the oak timber he was engaged in splitting. Although he was but ten years of age at the time he left his native land, his recollections of the shoes he had seen there were in the main correct. Nevertheless, the shoes he then made were such as would at the present day be considered much too heavy, and somewhat clumsy. They were ten feet in length, were four inches in width behind the part on which the feet rest, and in front were four inches and a quarter wide.

Having completed his snow-shoes to the best of his knowledge, Thompson at once set out for Placerville, in order to make experiments with them. Being made out of green oak, Thompson's first shoes were very heavy. When he reached Placerville, he put them upon a pair of scales, and found that they weighed twenty-five pounds. They were ponderous affairs, but their owner was a man of giant strength, and he was too eager to be up and doing to lose time in making another pair out of lighter wood.

When he made his first public appearance, he was already able to perform such feats as astonished all who beheld them. His were the first Norwegian snow-shoes ever seen in California. At that time, the only snow-shoes known were those of the Canadian pattern. Mounted upon his shoes—which were not unlike thin sled runners in appearance—and with his long balance-pole in his hands, he dashed down the sides of the mountains at such a fearful rate of speed as to cause many to characterize the performance as foolhardy. Snow-shoe Thompson did not ride astride his guide-pole, nor trail it by his side in the snow, as is the practice of other snow-shoers when descending a steep mountain, but held it horizontally before him, after the manner of a tight-rope walker. His appearance was most graceful when seen darting down the face of a steep mountain, swaying his long balance-pole now to this side and now to that, as a soaring eagle moves its wings.

His first trip was made in January, 1856. He went from Placerville to Carson Valley, a distance of ninety miles. With the mail bags strapped upon his back, he glided over fields of snow that were in places from thirty to fifty feet in depth, his long Norwegian shoes bearing him safely and swiftly along upon the surface of the great

drifts. Having successfully made the trip to Carson Valley and back to Placerville, Snow-shoe Thompson became a necessity, and was soon a fixed institution of the mountains. He went right ahead, and carried the mails between the two points all that winter. Through him was kept up the only land communication there was between the Atlantic States and California.

The loads that Snow-shoe Thompson carried strapped upon his back would have broken down an ordinary man, though wearing



[From "Marvels of the New West," by William M. Thayer, 1887.]

common shoes and traveling on solid ground. The weight of the bags he carried was ordinarily from sixty to eighty pounds; but one winter, when he carried the mails for Chorpenning, his load often weighed over one hundred pounds.

In going from Placerville to Carson Valley, owing to the great amount of uphill traveling, three days were consumed; whereas, he was able to go from Carson Valley to Placerville in two days, making

forty-five miles a day. Not a house was then found in all that distance. Between the two points all was a wilderness.

While traveling in the mountains, Snow-shoe Thompson never carried blankets, nor did he even wear an overcoat. The weight and bulk of such articles would have encumbered and discommoded him. Exercise kept him warm while traveling, and when encamped he always built a fire. He carried as little as possible besides the bags containing the mail.

At the time Thompson began snow-shoeing in the Sierras, nothing was known of the mysteries of "dope"—a preparation of pitch, tallow, and other ingredients, which, being applied to the bottom of the shoes, enables the wearer to lightly glide over snow softened by the rays of the sun. Dope appears to have been a California discovery. It is made of different qualities, and different degrees of hardness and softness. Each California snow-shoe runner has his "dope secret," or his "pet" dope, and some are so nice in this respect as to carry with them dope for different hours of the day; using one quality in the morning, when the snow is frozen, and others later on, as the snow becomes soft. As Thompson used no dope, soft snow stuck to and so clogged his shoes that it was sometimes impossible for him to travel over it. Thus, it frequently happened that he was obliged to halt for several hours during the day, and resume his journey at night, when a crust was frozen on the snow.

Snow-shoe Thompson's night camps—whenever the night was such as prevented him from pursuing his journey, or when it was necessary for him to obtain sleep—were generally made wherever he happened to be at the moment. He did not push forward to reach particular points, as springs or brooks. He was always able to substitute snow for water, without feeling any bad effect. He always tried, however, to find the stump of a dead pine, at which to make his camp. After setting fire to the dry stump he collected a quantity of fir or spruce boughs, with which he constructed a sort of rude couch or platform on the snow. Stretched upon his bed of boughs, with his feet to his fire, and his head resting upon one of Uncle Sam's mail bags, he slept as soundly as if occupying the best bed ever made; though, perhaps, beneath his couch there was a depth of from ten to thirty feet of snow.

At a place called Cottage Rock, six miles below Strawberry Valley, he had a small, dry cavern, in the shape of an oven, in which he

was in the habit of housing, as often as he could make it convenient to do so. There, his bed of boughs was always ready for him. Curled up in his cavern—which was but little larger than an ordinary baker's oven—with a fire of blazing logs in front, he slept in comfort and safety.

When Snow-shoe Thompson was carrying the mail from Genoa, Nevada, to Murphy's Camp, California, in 1862, he traveled by way of Woodford's, Markleyville, Hermit Valley, and the Big Trees. At Hermit Valley were some deserted houses, and occasionally he found it convenient to lodge for a night in one of these. The snow was frequently so deep in that elevated region that it was a difficult matter to find the houses, so completely were they buried beneath the great drifts. He was obliged to prospect for the buildings, by probing the snow with his balance-pole.

At times, when traveling at night, Thompson was overtaken by blizzards, when the air would be so filled with snow, and the darkness so great, that he could not see to proceed. On such occasions, he would get on top of some big rock, which the winds kept clear of snow, and there dance until daylight appeared; the lateness of the hour and the blinding storm preventing his making one of his usual camps.

Snow-shoe Thompson was one of those unfortunate persons whose lot in life it is to do a great deal of work and endure many hardships for very little pay. For twenty winters he carried the mails across the Sierra Nevada Mountains, at times when they could have been transported in no other way than on snow-shoes. After he began the business he made his home in the mountains, having secured a ranch in Diamond Valley, when for five winters in succession he was constantly engaged in carrying the mails across the snowy range. Two years he carried the United States mails when there was no contract for that service, and he got nothing. On both sides of the mountains he was told that an appropriation would be made and all would come out right with him; but he got nothing except promises.

If not the swiftest, it was universally conceded that, even up to the time of his death, Thompson was the most expert snow-shoe runner in the Sierra Nevada Mountains. At Silver Mountain, Alpine County, California, in 1870, when he was forty-three years of age, he ran a distance of sixteen hundred feet in twenty-one seconds. There were many snow-shoers at that place, but in daring

Thompson surpassed them all. Near the town was a big mountain, where the people of the place were wont to assemble on bright days in winter, to the number of two or three hundred. The ordinary snow-shoers would go part way up the mountain to where there was a bench, and then glide down a beaten path. This was too tame for Thompson. He would make a circuit of over a mile, and come out on the top of the mountain. When he appeared on the peak he would give one of his wild High-Sierra whoops, poise his balance-pole, and dart down the face of the mountain at lightning speed, leaping all the terraces from top to bottom, and gliding far out on the level before halting.

Snow-shoe Thompson seldom performed any feat for the mere name and fame of doing a difficult and daring thing; yet W. P. Merrill, postmaster at Woodford's, Alpine County, writes me as follows, in speaking of some of Thompson's achievements: "He at one time went back of Genoa, on a mountain, on his snow-shoes, and made a jump of one hundred and eighty feet without a break." This seems almost incredible, but Mr. Merrill is a reliable man, and for many years Thompson was his near neighbor, and a regular customer at his store. Thompson doubtless made this fearful leap at a place where he would land in a great drift of soft snow. I spoke of this feat to Mr. C. P. Gregory, formerly Thompson's neighbor in the mountains, but at present a resident of Virginia City, Nevada, and he answered that although he had never heard of that particular leap, he did not doubt what Mr. Merrill said. "I know," said Mr. Gregory, "that at Silver Mountain he often made clear jumps of fifty and sixty feet."

Snow-shoe Thompson carried across the Sierras much of the material on which the *Territorial Enterprise* was first printed, that paper being first published at Genoa, by W. L. Jernegan and Alfred James. It was then a weekly, and the first number was issued on Saturday, December 18, 1858. Thus it is seen that Thompson was called upon in all manner of emergencies. He not only packed newspapers across the mountains, but also the types on which newspapers were printed.

Postmaster Merrill says: "A few years before his death, Thompson one winter made a trip from here [Woodford's] up into Sierra County on his snow-shoes, to run a race with the snow-shoers up there. But he would not run their way. They had a track beaten

down the hill where they ran. They would then squat down on their shoes, and run down along the prepared course. Thompson offered to put up money and go out upon the highest mountains, where there was no track made, and run and jump with them, but no one would take him up." The style of snow-shoe racing mentioned by Mr. Merrill is nothing more nor less than "coasting on snow-shoes," and in Alpine County it is so called—is not dignified with the name of snow-shoeing.

Thompson was forty-nine years and fifteen days old, when he died. He was buried at Genoa, and now rests by the side of his son Arthur, his only child and a most promising lad, who died June 22, 1878, at the age of eleven years and four months.

Thompson left his widow a farm of one hundred and sixty acres, in Diamond Valley, just across the Nevada line, in California. She married again, and is now Mrs. John Scossa. She recently caused a tombstone to be erected over the grave of her former husband. At the top of the stone are seen a pair of artistically carved snow-shoes, crossed, and twelve inches in height.

John A. Thompson was the father of all the race of snow-shoers in the Sierra Nevada Mountains; and in those mountains he was the pioneer of the pack train, the stage coach, and the locomotive. On the Pacific Coast his equal in his peculiar line will probably never again be seen. The times and conditions are past and gone that called for men possessing the special qualifications that made him famous. It would be hard to find another man combining his courage, physique, and powers of endurance—a man with such thews and sinews, controlled by such a will.

* * *

CROSSING THE SIERRAS—NORWEGIAN SNOW SKATES*

THE recent rapid settlement of that great belt of fertile valleys lying along the eastern base of the Sierra Nevada range of California, has made necessary the extension of mail facilities to that inland world in advance of any provision for that purpose by the agents of the general government. Previous to the winter of 1854-5 the inhabitants of these valleys for three or four months of the year

* Reprinted, with omission of one paragraph, from *Hutchings' California Magazine*, vol. i, no. 8, February, 1857, pp. 349-352.

were closed in by almost inaccessible snow-clad mountains on the west, and on the east by a vast extent of desert country stretching towards Salt Lake, that during the winter months seems peculiarly the great battle ground of the winds and the storm.

The great depth of the snows upon the Sierras renders their passage by pack animals not only difficult but dangerous, and often for months together wholly impracticable. To remedy this great inconvenience and secure to the people of the valleys a regular corre-



spondence with California west of the mountains, a proposition was made by Mr. John A. Thompson, a Norwegian by birth, to convey the mails semi-monthly without regard to the depth of the snow. The proposition was accepted and we here present him mounted upon the true Norwegian snow skates, of which, a knowledge of

their construction and use he had retained from the memory of boyhood, having left his native land at the age of ten years.

Entirely unlike the snow-shoes of the North American Indians or the people of the Canadas, well adapted as they are to a loose light snow and a level country, the snow skates are peculiarly adapted to the rugged features of our mountains and the damp compact snows that annually accumulate upon them.

The skate consists of a single piece of strong stiff wood, from six to seven and a half feet in length, that turning up in front six or eight inches terminates in a point, six inches in width on the bottom at the bend and gradually tapering backwards to four inches in width. It is flat on the bottom, the top oval or rounded except about a foot in length where the foot rests, a little back of the center; here it is an inch and a half in thickness, from thence tapering to a half inch or less at either end.

The only fastening is a single strap over the toe of the boot admitting of the freest possible motion to the feet and ankles. In making progress the skate is only raised from the snow when it is desired to make a shorter turn than would otherwise be possible. On uphill or level surfaces the skates are placed parallel to each other and pushed forward alternately with ease about the length of an ordinary step, but the impetus given causes them to slide further than this, while upon descending surfaces they run with great ease and rapidity, and when the declivity is very great, making it necessary to check the motion by throwing the weight of the skater upon a double handed staff, six feet in length, forced into the snow upon one side as showed in the cut. With these skates Mr. Thompson, heavily laden, travels over the otherwise almost inaccessible snow clad cliffs and gorges of the Sierras, a distance of from thirty to forty miles a day, thus bearing the sealed tidings, doubtless of hope or disappointment, happiness or grief to many.

It is a feature of our inland transit unique in itself, and as far as it relates to the American Continent, we believe peculiarly Californian.

As showing to some extent the perils and dangers incident to a winter passage of the Sierra Nevada, we subjoin the following interesting account from the *Sac. Union*.

J. A. Thompson, the Expressman of the Sierra Nevada Mountains, called upon us yesterday, upon the completion of his second

trip this winter to Carson Valley, and placed us in possession of some highly interesting particulars connected therewith. This trip is peculiarly interesting from the fact that it was made on his Norwegian snow-shoes, seven and a half feet long, over snow which, at some points, he was unable to fathom.

About three miles above Placerville, he came to the snow, having left that place on the 20th of December. He was accompanied by two men who had awaited his going, and at this point they all put on their snow-shoes. The weather was clear, but cold, and the party made Lake Valley without any incident worthy of note.

On the night of the 23d December, they reached a deserted cabin in that valley, and struck a fire. Mr. Thompson being anxious to press on, told his companions that he would go ahead and stay over night at another cabin about a mile ahead, and that they could overtake him in the morning. Although anxious to stop, rather than separate from him, they determined to go on that night, and once more they all started off. About midnight, they reached the cabin and found everything dark and the door closed. Mr. Thompson, not expecting to find any one in, however, knocked and "hallooed," when, to his surprise, a voice answered from within. On entering, Mr. Thompson found a man lying alone upon the floor in that dreary spot, without other covering than the clothes he wore, and the boots frozen to his feet.

In this deplorable condition, he had been lying for twelve days, with nothing to sustain life but raw flour. His feet were completely frozen, and will both have to be amputated below the knee. His sufferings must, according to the statement of Mr. Thompson, have been indescribable, and yet he bore them with the fortitude of a martyr, and scarcely permitted a murmur to escape him. Although death would soon have terminated his agony, he still had a lingering hope that Providence might direct Mr. Thompson by his cabin, and thus save him. Had not Mr. T. gone on that night, he would probably have passed the cabin in the morning without stopping.

The sufferer proved to be James Sisson, the partner of Mr. Hawley, about six miles above Placerville. He had been engaged in the packing business, and left for Carson Valley on snow shoes some two weeks previous. The storm overtook him on his way, and his feet becoming frozen, it was with great difficulty he reached his cabin or trading post. On arriving there he found his matches so

wet that he could not strike a light, and thus he remained for four days, when he discovered a box of matches in his cabin which furnished him a fire. He then attempted to cut his boots off his feet, but could not succeed; and nothing remained for him but to await either succor or death.

On the 24th, Mr. Thompson started for Carson Valley, and on Christmas Day got five men to agree to accompany him back to Lake Valley. He rigged them out with snow-shoes, made after the pattern of his own, and taking with them a sled upon which to haul the sufferer, they started back on the 26th. They reached the trading post that night, and laid over during the 27th, in consequence of the severe weather—another snow being falling. On the 28th, they packed Mr. Sisson on the sled, and thus, with great labor, succeeded in conveying him safely to Carson Valley, where the sufferer is now lying in the care of Dr. Dagget. Mr. Thompson, on his return will take with him some chloroform which will be administered to the patient and his feet amputated, as it was not deemed advisable to attempt the operation without this agency.

Mr. Carson left Carson Valley on Monday, January 5th, and arrived in this city yesterday morning, the 9th. At Big Cañon, the snow was four feet deep; at Hope Valley, five feet; at Luthers' Pass, six feet; at Lake Valley, five feet; and in the pass on Johnson's Summit, he sounded a depth of ten feet without reaching bottom. He estimates the depth of snow for eight miles this side of Slippery Ford at twelve feet.

WHY WE SHOULD MEASURE OUR GLACIERS*

BY FRANÇOIS E. MATTHES

THE Sierra Club has recently joined a movement that is rapidly gaining impetus throughout the Pacific and Rocky Mountain States—a movement to secure annual measurements of the variations in length and volume of the glaciers in the United States, the purpose being to ascertain the nature and trend of these variations, which doubtless are caused by climatic fluctuations now in progress. A committee, under the chairmanship of Oliver Kehrlein, has been appointed to take part in this work, and the members of that committee are now making annual visits to the more important glaciers of the Sierra Nevada and Mount Shasta. The results obtained by them are forwarded to the Committee on Glaciers of the American Geophysical Union, which inaugurated this program of annual glacier measurements a few years ago and which constitutes the central agency for collecting, tabulating, and publishing the glacier data from all parts of the United States, including Alaska.

Among those who faithfully collaborate with the central committee in this far flung enterprise may be named the Research Committee of the Mazamas, which as early as 1928 began to make regular measurements to the fronts of certain glaciers on Mount Hood; the Park Naturalists of Yosemite, Mount Rainier, Glacier, and Rocky Mountain national parks; and the Superintendent of Mount McKinley National Park, Alaska. The National Park Service naturally plays a prominent part in this work, for the majority of the larger glaciers in the continental United States lie within its reservations. To this service, moreover, belongs the credit of having instituted the first systematic glacier measurements in the United States, namely those on the Nisqually Glacier on Mount Rainier. As a result there is now at hand a continuous and extremely valuable record covering the recession of that glacier for 16 years.

Space hardly permits mentioning individuals who are coöperating, but one there is whom I would not overlook—namely, our friend Bert Harwell, of Yosemite National Park. Not only has he organized and systematized in exemplary fashion the business of measur-

* Published by permission of the Director of the United States Geological Survey.

ing glaciers in his official domain, but he has lifted it from a mere routine to a rite of almost dramatic interest to the people of California. And that is, indeed, a most fortunate circumstance, for the story which the glaciers are telling, slowly, mutely, through the years, may, for all we know, contain a fateful portent for the future.

And that brings me to the question: Why is it important that we should measure our glaciers? What need is there of going to all of this trouble, and what purpose will be served by the results?

The answer is that glaciers are extremely sensitive to climatic fluctuations and register them more vividly than do streams, springs, lakes, or vegetation; and since we have so delicately, so daringly adjusted some of our great agricultural and engineering enterprises and their dependent industries to existing climatic conditions, it behooves us for the good of our complex American civilization to keep a close watch on climatic changes or fluctuations, however slight and transient, that may be taking place.

True, our meteorologists render efficient service with their accurate daily measurements of temperature, atmospheric pressure, precipitation, and humidity; and glaciers are after all very imperfect and complex meteorological instruments, varying among themselves by reason of differences in length and shape, in topographic situation, and exposure with respect to sun and wind, so that a number of local factors must be taken into account in the interpretation of each individual record. And the advances and recessions of their fronts or termini (I positively refuse to employ the inelegant term "snout") are but indirect effects of accessions of new snow on the one hand and of losses by melting and evaporation on the other. Nevertheless and notwithstanding all these disadvantages, glaciers offer supplementary information regarding climatic conditions that is not lightly to be disregarded.

An excellent illustration is afforded by the Nisqually Glacier on Mount Rainier. At the very time when the records of the national weather service, covering many decades, seemed to contain nothing bearing out the popular belief that perceptible climatic changes were actually in progress, or at least had taken place since times within the memory of the older generation, the Nisqually was melting back steadily at the very perceptible average rate of 60 feet per year. Indeed, since 1918, when the National Park Service began its annual measurements, the Nisqually has receded a total of 1081 feet. In

addition, it is known from reliable observations by the late James Longmire, the first white settler at the foot of the peak, that in 1885 the glacier reached down to the place now occupied by the highway bridge. And the descriptions of Lieutenant (later General) A. V. Kautz, who in 1857 made the first attempt to climb the peak, permit us to locate the position of the glacier's terminus at that early date, with a fair degree of accuracy, at a point 760 feet below the present site of the bridge. Accordingly it is reasonably certain that the Nisqually receded 760 feet from 1857 to 1885; 140 feet from 1885 to 1892; and 1310 feet from 1892 to 1918. Its total known recession prior to 1918 therefore was no less than 2210 feet, and in all, the glacier has been shortened 3291 feet, or nearly two-thirds of a mile, since it was first sighted by white men.

It is noteworthy, further, that the Nisqually's recession shows no signs of slowing up as the terminus reaches higher and higher elevations. On the contrary, it is proceeding now at more and more rapid rates. From 1857 to 1885 the recession took place at a mean rate of slightly over 27 feet per year; from 1885 to 1892 the mean rate was 20 feet per year; from 1892 to 1918 the mean rate was 50.4 feet per year; and since then the rate has increased to nearly 68 feet per year. The most rapid recession was observed in 1934, when it reached 155 feet. Three other large glaciers on Mount Rainier on which measurements were begun a few years ago—the Carbon, Emmons, and South Tahoma—show in the main comparable rates of recession, varying somewhat with their dimensions and orientations.

It might be argued, perhaps, that this rapid and continued recession of the glaciers on Mount Rainier is occasioned not by a climatic change but by a gradual rekindling of the volcanic fires beneath the peak. If that were true, however, the glaciers on Mount Rainier would constitute an exceptional, isolated case, but the fact is that the glaciers on the Rocky Mountains, notably in Glacier National Park, where volcanic action is wholly absent, also are rapidly melting back, and appear to have done so for several decades. The recessions of those glaciers, it is true, are on a much smaller scale than those of the glaciers on Mount Rainier, but they are roughly proportionate to the size of the ice bodies concerned.

Comparison of recent photographs with those which I took in 1900 and 1901, while mapping that region, show plainly the reductions in length and thickness which the Blackfoot and Sperry

glaciers have suffered: they reveal the sadly emaciated appearance of the Grinnell Glacier, which formerly filled its amphitheater quite snugly; and they advertise conspicuously the complete disappearance of the glacieret that clung so spectacularly just below the summit of Going-to-the-Sun. Altogether it is evident that Glacier National Park now is not nearly so beglaciated and besnowed as it was at the beginning of this century.

The Sierra Nevada, too, has lost much of its snow and ice during the past 50 years. Photographs taken by the late Professor I. C. Russell in 1883 show, for instance, that the front of the Lyell Glacier then was fully 300 feet nearer to the terminal moraine than it now is; likewise that the Dana Glacier extended at least 100 feet farther out towards its terminal moraine than it does at present. But these figures do not adequately express the real magnitude of the changes that have taken place in these ice bodies. Both of them have been greatly reduced in thickness and consequently in volume. For the Lyell Glacier this reduction is difficult to estimate, but for the Dana Glacier, which is relatively circumscribed, comparisons with the aid of Professor Russell's photograph have led Assistant Park Naturalist M. E. Beatty to estimate that the loss may amount to fully one-third of the total mass, as it existed in 1883. This is a far greater loss, proportionately, than that which the Nisqually Glacier has suffered in the same interval.

There is ample evidence, further, that a host of small cirque glaciers have vanished from the range during relatively recent times. The little glacier under Merced Peak which John Muir discovered to his surprise and joy, in 1871, is a typical example. It is, in fact, the one which gives us the clue to the disappearance of all of the others. It was no mere snow bank but a real though small residual glacier, composed of laminated ice and rent by crevasses due to its gravitational movement, as Muir clearly perceived, yet all that now remains in its empty cirque, as Mr. Harwell can testify, is the terminal moraine that was built up at its front. Now there are throughout the High Sierra scores, if not hundreds, of empty cirques that contain short moraine loops of the same fresh, unweathered type. To mind come at once the small cirque to the south of Fletcher Lake, which is shut in by a marvellously perfect moraine wall, and the larger cirque at the head of Fletcher Creek, which contains a longer but less conspicuous moraine loop; for these were among the

first to attract my attention in the Yosemite National Park, back in 1913. There is no need to enumerate other examples, for features of this kind must be familiar to all who have mountaineered in the High Sierra. Suffice it to say that there is little doubt in my mind, after several years of intensive study of glacial moraines in the Sierra Nevada, that every one of those cirques contained a small glacier some fifty or sixty years ago, or to put it more broadly, during the nineteenth century.

In this connection it would be a real satisfaction to learn the approximate date of the disappearance of Muir's little glacier. Does any member of the Sierra Club perchance possess first hand information concerning it?

This much is certain in any event that the fresh, unweathered moraines in question do not date back to the glacial epoch. Their age is to be measured not in thousands and tens of thousands of years but in decades and centuries. For that matter, the massive moraine loops that encircle the Lyell, Maclure, Dana, Darwin, and Palisade glaciers belong to the same category. They differ from those in the empty cirques only in that the glaciers by which they were built still lie within them, though greatly shrunken in size. These glaciers have survived because they were the most favorably situated for the amassment of snow as well as for its conservation; they are the last remaining ones of a great array of dazzling ice bodies that adorned the Sierra Nevada during early historic times.

In the Alps of Switzerland and Savoy it has been found possible to date some of the more recent moraines; for there mountain communities have existed for many centuries, and in their archives occur descriptions of the specific glacial advances by which these moraines were laid down. In fact, by assiduous research of this kind Paul Mougin, of the *Département d'Eaux et Forêts* (Department of Water Resources and Forests), succeeded in reconstructing from authentic documentary evidence the oscillations of the glaciers on the French side of the Mont Blanc chain as far back as 1580. As a result it is definitely known that the glaciers in the Alps were relatively small prior to the 16th century; that they then increased considerably in length and volume, and maintained their great size, except for minor oscillations, up to the middle of the 19th century. After that a general recession set in which was checked by a minor re-advance from 1875 to 1898. The later details of this desultory recession,

which has been more pronounced in some parts of Europe than in others, and in places even offset by slight advances, may be gleaned from the reports of the International Glacier Commission, which systematically gathered these data from 1894 to the beginning of the World War; also from the reports of its successor, the *Commission Glaciologique*, which was appointed by the International Geodetic and Geophysical Union in 1927.

There is, of course, no hope that we shall ever be able to trace the oscillations of the American glaciers back as far and as accurately as those of the French and Swiss glaciers have been traced, because of the recency of the settlement of this country. Kautz's observation on the terminus of the Nisqually Glacier, in 1857, appears to be the earliest bit of information that we have concerning any glacier in the continental United States.¹ For the Sierra glaciers our data do not go farther back than those of Professor Russell in 1883. It is truly unfortunate that the Spanish and American pioneers, who had so much energy and enterprise, did not explore the mountains far enough to get in sight of the glaciers. Their interests, however, lay elsewhere.

Nevertheless, in the Sierra Nevada at least two significant facts concerning the past oscillations of the glaciers can be learned from the character and disposition of their moraines. And these two facts afford us an enlightening perspective on the climatic fluctuations that have occurred during recent centuries.

In the first place it is patent to the trained eye of a glaciologist that the short moraine loops in the cirques of the High Sierra are very much younger than the youngest moraines of the ice age. They constitute a series by themselves unconnected by any transitional forms with the moraines of glacial times, and there is therefore good reason to believe that they belong to an epoch that was separated from the ice age by a considerable interval. What happened in that interval? Did the glaciers of the ice age die away altogether, so that the Sierra Nevada was divested of all ice? Yes, as I interpret the glacial record, that is precisely what happened. And after that warm interval the climate again turned cooler and a new generation of cirque glaciers was born. The Lyell, Maclure, Dana, and others are the last of that later generation.

¹ The Committee on Glaciers would greatly appreciate being informed of any other early data on the state of glaciers in this country or Alaska that may be known to the readers of the SIERRA CLUB BULLETIN.

There is, I should add, nothing particularly heterodox in this idea of an interval of warm climate—warmer than now prevails—following the ice age. Such a warm interval has long been recognized by European glaciologists, and there is abundant proof of it throughout the northern hemisphere. To mention but two bits of evidence of special interest to Americans: The Norsemen who centuries before Columbus made his voyage of discovery settled upon the shores of Greenland, there found thriving forests, where now the barren ground is permanently frozen. This is proved by the fact that their graves, now encased in frozen soil, are pierced by the roots of trees that have long since ceased to grow in Greenland. And to come closer home: High up on the southwest slope of Mount Hood the Mazamas in 1931 discovered the remains of a forest of tall, straight trees that lie buried beneath a recent moraine of the Zigzag Glacier. That forest, though not composed of timber line trees, had flourished at a level somewhat higher than the present timber line and then was overwhelmed by the glacier, which more recently has retreated up the mountain side. Evidently at a time not so very remote the timberline on Mount Hood was about a thousand feet higher than it now is.

The other fact that is evident from a study of the moraine loops in the Sierra cirques is that they are the product of a long series of small glacial advances that were all approximately of the same general magnitude. In many of the cirques the glacial advances were so nearly equal that the terminal moraines were piled against and upon one another until there resulted a single embankment that now seems disproportionately big for the small glacier that built it. In other cirques, however, the glacial advances differed somewhat in extent and the terminal moraines lie more or less spread out in consequence, so that many of them can be counted. Most instructive in this respect is the beautifully rhythmic series of moraines in the cirque south of Kuna Peak. They lie closely pressed against one another, yet with moats between the crests, all repeating the same curves and angles that outline the lobes of the ancient ice front. How many moraines there are in the series I cannot say, as they were partly covered by fresh snow when I saw them in 1916; but I should judge that there may readily be a dozen or more. I certainly hope that before long someone will visit that cirque and make a complete and accurate count.

There can be no doubt that these moraines in the Kuna cirque record a rhythmic series of climatic pulsations of gradually diminishing intensity. How many years or decades are represented by each moraine crest, how many centuries by the entire series, is still a matter of guess, but in any event they show us that such a series of moderate climatic pulsations has been in progress for a long time and has led right up to the present. If it continues, all well and good, for such moderate climatic pulsations will work no hardship on us. They probably correspond to the recurrent waves in the climatic curve that are indicated by the rings in the Big Trees. If, on the other hand, there should come a decided departure from this mild see-saw in our climate, then we might indeed suffer. Which way fate lies, our annual glacier measurements will tell, and possibly even may foretell, in the course of time. Let us therefore continue them faithfully, assured that our efforts are really worth while, and will yield results of economic as well as scientific value to posterity.

A WAY TO "BRING BACK" THE NATIVE BIGHORN TO THE YOSEMITE

BY JOSEPH GRINNELL

MUSEUM OF VERTEBRATE ZOOLOGY, UNIVERSITY OF CALIFORNIA

IN the earlier days of John Muir there were still to be seen on the uppermost shoulders of the Yosemite Sierra small bands of bighorn, or mountain sheep (*Ovis canadensis sierrae*). Muir describes vividly how he himself, in the fall of 1873, watched a band cross the gorge of the upper San Joaquin not so very far south of the present southern boundary of Yosemite National Park. The very last record known to me of living bighorn anywhere in the Sierra Nevada north of Mammoth Pass is based on what was related by George Smith, a packer with whom I made a trip in September, 1915, from Walker Lake up Bloody Canyon, over Parker Pass, and on the Gem Lake. Smith had herded domestic sheep over much the same ground for many summers prior to the time of exclusion of sheeping from the Yosemite Park area in the '90's. The last time he saw bighorn, a dozen head or so, was in the summer of 1878, in the vicinity of Sonora Pass, a little north of the northern boundary of the park.

And what caused the general disappearance of the wild sheep from their former range? After having listened to Smith's stories around the camp-fire, and heard the offhand comments of other old-timers, my impression has grown that the sheepherders and other mountaineers of those days were accustomed regularly to shoot any and all bighorns met with, for food, and also with the feeling that unwelcome competitors were thereby being removed from the grazing-grounds. It was the uncontrolled rifle that sounded their final doom.

Muir intimates the same thing when, in 1901, he said: "Few wild sheep, I fear, are left hereabouts; for, though safe on the high peaks, they are driven down the eastern slope of the mountains when the deer are driven down the western, to ridges and outlying spurs, where the snow does not fall to a great depth, and there they are within reach of the cattlemen's rifles."

There is also the possibility that the native sheep became more or

less infested with parasites brought onto their common forage-grounds by domestic sheep, such as scab mites, liver flukes, and stomach worms. Relatively slight disability incurred from this source by the wild individuals, inducing lowered resistance, might have been sufficient, in combination with impoverished grazing resources, to cause many deaths in severe winters.

The finding of many relics of late years in the Yosemite high-country, consisting of much-weathered horns and horn-cores, and in 1933 of the entire desiccated carcass of a bighorn yielded up by Lyell Glacier, has stimulated the repeated suggestion that mountain sheep be "brought back" to the Yosemite. And why not? Domestic sheep have long been barred from the park; the vegetation to all appearances has largely recovered; all-year forage for bighorns is now available; specific sheep-parasites must have disappeared.

But just *how* shall the bighorn be "brought back"? This very question was put to me recently by a national park official, who further suggested that if I had, or should develop, some pertinent ideas I might well make them known through the Sierra Club; and having developed some ideas along this line, I accordingly offer them for whatever worth they may prove to have.

My main suggestion is that a "corridor" be established along the crest of the Sierra Nevada from the Mount Humphreys district south of Mammoth Pass, where bighorns are known still to persist, continuously to the Yosemite high-country. The essential condition which must be insured along this corridor fifteen miles or so wide is absolute freedom, uninterruptedly, from grazing by domestic sheep. This condition will mean restoration of forage, elimination of domestic-sheep-borne diseases, and return toward the natural estate on all scores.

Large portions of the Sierra crest, especially on its eastern side, are grazed by domestic stock each summer—which means that there is little or no forage left to tide over the needs of the wild animals that are dependent on that country through the winter and following spring. The boundary of the suggested corridor should to the eastward extend down to the 8000-foot contour; for it is generally thought that the chief wintering-ground of the bighorn was on that side, of quickly diminishing snowfall toward the lower levels. Mr. George M. Wright, Chief of the Wild Life Division, National Park Service, concurs with me in this view, as also with my general thesis.

Recent reports indicate that the native Sierra sheep in the region between Mount Whitney and Mammoth Pass are, fortunately, increasing in numbers. This means that in the natural course of events, food supply permitting, a larger and larger area will be occupied, *by natural process*. Thus, it is held, *if* the way be open, the succeeding generations of sheep will reclaim territory formerly occupied, farther and farther to the northward; and this was, according to dependable evidence, even as far north as Sonora Peak, Alpine County.

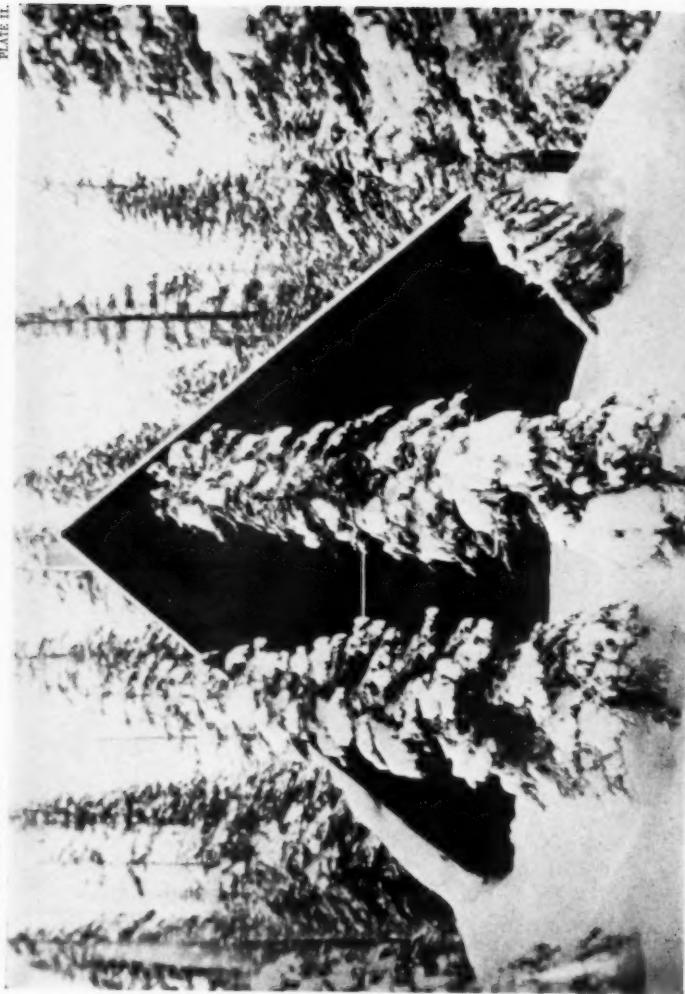
Not only would the native bighorn thus be benefited by the establishment of this corridor freed from grazing, but so would every other native mammal and bird, all being in final analysis dependent upon normally abundant vegetation; all these animals would be stimulated to resume their former status as to kinds and numbers. While this would apply to carnivorous species as well as to herbivorous ones, there is no ground in my mind for fearing that the native carnivores would seriously interfere with the expected "recovery." The original proper balance in the food chain, from the vegetational level up to the terminus in the rôle of the mountain coyote and wolverene, would find support and all classes of animals become available for scientific study and observation by summer-time visitors to the High Sierra. Thus, as regards the bighorn, there would return to Yosemite, in not so very many years, through entirely natural means, without appreciable cost, one of its original, spectacularly interesting, large mammals.

A different plan has, I am quite aware, been suggested for restoring native sheep to the Yosemite region: that of transplanting some animals from the Rocky Mountains. This plan I unhesitatingly oppose because the subspecies of the Rockies is not at all the same as ours. Aside from doubt as to whether any foreign race would succeed under the special conditions obtaining in the Sierra Nevada, I would hate to see our native race supplanted by an alien—on sentimental grounds. Perpetuation of every member of our own native fauna is by far the more desirable course. Then there is a serious practical reason against it, in that risk might be incurred of scab or some other affliction being brought in with non-native stock; if the latter became established and widespread, such affliction might be communicated to the residue of native sheep to the southward — to the latter's further undoing, perhaps final extinction.

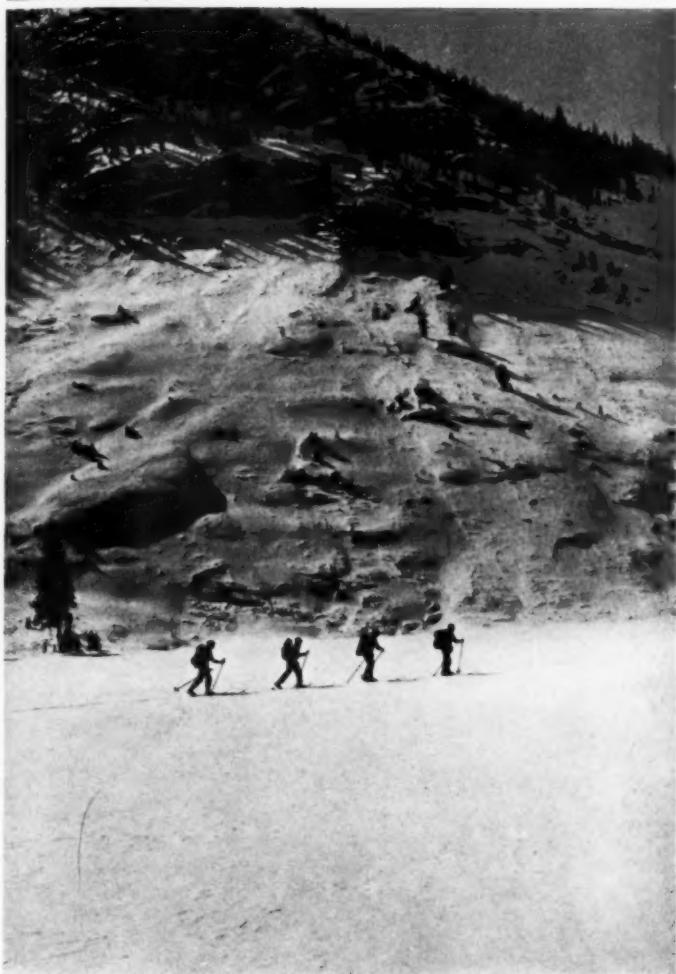
Yet another plan lately proposed is by special effort to eliminate



CLAIR TAPPAAN LODGE
Photograph by Joel H. Hildebrand



CLAIR TAPPAAN LODGE
Photograph by Marjory Dickeson

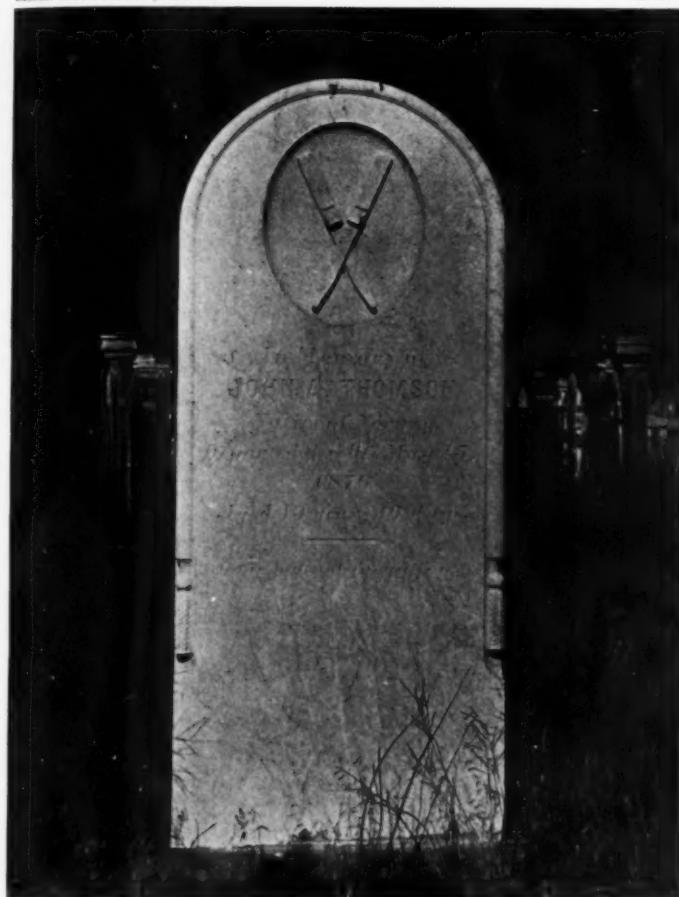


CROSSING MERCED LAKE IN FEBRUARY
Photograph by Lewis F. Clark

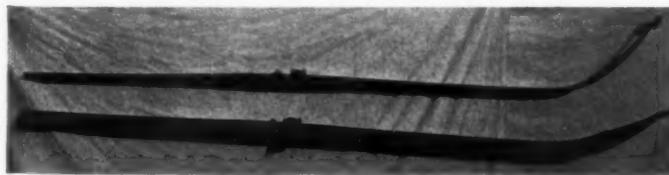


WINTER MOUNTAINEERING NEAR VOGELSANG PASS,
YOSEMITE NATIONAL PARK

Photographs by Lewis F. Clark, February, 1935



SNOW-SHOE THOMPSON'S GRAVESTONE, GENOA, NEVADA



SNOW-SHOE THOMPSON'S SKIS, NOW IN THE MUSEUM AT SUTTER'S FORT,
SACRAMENTO



LYELL FORK OF MERCED RIVER
Photograph by Ansel Adams

LYELL FORK OF MERCED RIVER

Photograph by Ansel Adams

SIERRA CLUB BULLETIN, VOL. XX.

PLATE VII.



FALL ON THE LYELL FORK OF THE MERCED, BELOW THE MEADOWS

Photograph by Marjory Bridge Farquhar



RODGERS PEAK AND ELECTRA PEAK
Photograph by Ansel Adams

the "natural enemies" of the sheep from all along the Sierra crest, on the (dubious) theory that all or most of the annual increase of the bighorn is being taken by carnivorous mammals. Then, through further efforts of rangers or local men on the ground, portions of the population south of Mammoth Pass could from year to year be urged or nursed along toward Yosemite Park. This might also involve more or less taming, semi-domestication, of the animals; and much "management" would be involved, costing money. But does all this meet the ideal of the nature-lover? Would it insure the preservation of our native wild animal life under free, normal conditions of its existence?

I agree exactly with what John Muir said as to the enemies of mountain sheep, after his own long experiences of the Sierra Nevada. "Eagles and coyotes, no doubt, capture an unprotected lamb at times, or some unfortunate beset in deep, soft snow, but *these cases are little more than accidents* [italics mine]. . . . Man is the most dangerous enemy of all. . . ." Given all-year natural subsistence, and given a continuous territory uncontaminated by domestic sheep and strictly patrolled against poaching by human hunters — furthermore, the animals *let alone*, without any "nursing" whatsoever—then, I say, our noble bighorn will "come back" in a very few years to its former range and numbers, and thenceforth hold its own, to thrill with keenest esthetic delight every summer-time visitor to our Yosemite highlands.

HIGH TRIP GLEANINGS

BY CEDRIC WRIGHT



HOW strange to find one's self newly arrived at nine thousand feet, coming out of the first much needed nap, tingling back to life like a foot that has gone to sleep! There is amazement at the vision of our former selves—at the tremendous scramble of leaving home. Then the ride through broad spaces, a great serenity enfolding the busy and important little human. Then curves of the mountain road and a strange dimming of the mind, as if sliding down an endless corkscrew toward half-consciousness.

Now we have emerged through the veil. Tuolumne Meadows! Sierra Club trip!

Against a background of unlimited leisure we face our simple puttering; making a billycan-fire assumes the dreamlike quality of creating a work of art. This sudden overwhelming freedom welcomes every idea of action. As the stillness forms a background hungry to enhance every sound, so, through little things, the joy of living expands. One is aware of the roots and directions of his whole being, and starts moving in harmony with them. Perceptions which fit each individual need seem to drift in from the earth and sky. A vast healing begins—a healing to the outraged inner self, the self long harassed by the insolent hammering of an advertising world and by the impact of opinions forced upon us by the high and mighty and by newspapers, a self harassed by the stupid messes into which overpopulated humanity has gotten itself.

Now one is face to face with something quite different. Here is Nature. She invites an analysis of herself. And, in this crystal-gazing, our perceptions are freed from the complex trivialities of the city. The forest's ideas are almost too simple to be understood, too direct and unpretentious to attract attention. They are unconcerned about attracting attention. A tree, a rock, has perfect poise and content. There is no pretending to be anything but itself. In its life, a life enclosing whole solar systems within the atom, there surely is a consciousness utterly beyond our comprehension. Some high emotion embraces everything in time and space, too fine for language or thought. There is something in the tree, or rock, of cosmic con-

sciousness, which makes its life infinitely rich. In the contemplation of this, one begins to doubt whether man is, after all, the highest form of life.

A tree establishes its own root-system; not merely its material roots, but also those more important ones—the roots of its beauty and of its unknown consciousness. Through dreamlike communion a tree is not only itself, but is also a part of the world-consciousness. There is no veneer, nothing painted on, nothing but real growth out of itself, out of itself in close communion with the universal spirit. What an example!

Nature, as exemplified by clouds and water, rocks and trees, does not proselyte with a club, does not crash down on man's little creed, but moves with a subtle serenity and by example only. In such company one maintains contact with the sources of inspiration. One is not troubled with the thought of other people's disapproval, the stamp of clique and caste, or the attainment of place and power.

As the astronomer predicts the appearance of a new star, so, in trees, one may discern the signs of a great consciousness. There is an aura which glistens about a tree; and there is a dominant chord which can only be the composite of all its life. This dominant chord is one of peace and beauty. Must not the tree's consciousness give rise to these attributes?

There is no monotony in these aspects of Nature—there is an infinite variety; but always this integrity of peace and beauty and self-containment. If only *People* could more often be like this! The Wilderness gets along with itself, our eternal healing example.

SIERRAN, 1914 - 1934

BY RUTH R. CURRIER

FROST sparkling on the far reaches of the meadows; Unicorn Peak sharply etched against the sky; Lembert Dome solid on the horizon; and long wisps of smoke lying low over the camps in the trees. . . .

All accounts of the annual outing of the Sierra Club should begin with a rhapsody. No other word holds so well the joy of the out-of-doors, the sense of well-being, the thrill of mountain beauty, and the anticipation of care-free weeks to come.

For several days there had been unusual activity around the gray-stone Parsons Lodge, with the setting up of the commissary and the hour-by-hour arrival of cars spilling their loads of smiling Sierrans and brown dunnage-bags near the Soda Springs. With the arrival of the last stageful of those who had left the Yosemite and the Big Trees behind them, all were assembled for the first dinner in camp. One of Dan's dinners *par excellence*, and the warmth of the gay greetings of old friends, made every one at home for the first night under the stars.

Down in a circle of rocks the camp-fire soon sent up its dancing flames, and around its cheery heat the newcomers listened to necessary advice for deportment in the mountains. It all bears repeating from year to year for the oldsters as well. Getting used to a new environment always calls for alertness and caution; and learning to take care of oneself under unusual circumstances is not the least of the lessons of a Sierra Club outing.

The night was cold, and after such a chilly initiation, few indeed cared to linger in their sleeping-bags, so that as soon as the sun was well up in the sky congenial groups departed to visit remembered scenes or to explore lakes and peaks for the first time. Luncheons at Dog Lake, or at Cathedral or Elizabeth, with the new and precious tea-pails getting their first coat of black, a coat that was to grow thicker and blacker with each successive brew of the cup that cheers. The wise ones gave some time during the next two days in the Meadows to the weighing of equipment; and sad it was for the heedless who overlooked this chore and found on the morning of the

first move that the merciless scales disclosed their weakness in putting in those extra films, or that box of nuts, or a lemon or two. The courteous but adamant weighers and checkers were immune to blandishments, and, then and there, in the cold gray dawn, did the fatal poundage have to be removed.

After breakfast, by twos and threes, the camp began its first trek across the bridge to find the trail along the riverside. Passing through the slumbering camps of the motorists, with here and there an early riser to look us over, we headed toward Tuolumne Pass and Babcock Lake. Not many, except those in good trim, pass the first day without openly or silently reminding themselves, "We do this for pleasure"—for feet are tender and wind is short as we climb into the upper reaches. But all the time the smell of the pines is in our nostrils, the crystal air is blowing the cobwebs out of every corner of our beings, and a brief rest refreshes us.

Up through the trees and out into the open, we soon passed little lakes. A brief stop for tea and lunch, a bath in an icy stream, a flash of recognition for the lovely trees by white water where we lunched three years ago, then on down to camp near Babcock Lake. There, late in the afternoon, we were joined by Mr. Colby and two girls from the East. The latter, fresh from a long ocean voyage, had stepped off the long trail from Yosemite in one day.

Morning found us on the move again, marveling at the long granite slope just outside of camp, with the water cascading over its smooth surface. We crossed Maclure Fork, a lovely stream giving promise of lurking trout to tease the fishermen. Then the climb out of the canyon began in earnest. Up, up the zigzags, the slow walkers encouraging each other, the fast ones bounding ahead, in some instances to be passed by the plodders later on. At last the plateau above Washburn Lake was reached, with inspiring glimpses of the Merced Range between the trees.

At the Lyell Fork of the Merced, a four days' sojourn in a green mountain meadow surrounded by peaks promised time for the mountaineers to make records for the club. Here, Colonel Foerster renewed the days of his youth, when as a member of the United States Cavalry he helped patrol this region to clear it of sheepherders and their flocks. With a companion, he visited the fine peak which years ago was named in his honor. It was at this camp that three Dianas struck off with their own rope and confidently conquered a moun-

tain all by themselves. One particularly impressive peak in the cirque above the camp was distinctive for its sculptured mass and for the way it responded to changing lights. It was glorious in the last rays of the setting sun, and when it was proposed to name it Mount Ansel Adams, for our leader of trail and camp-fire, the suggestion met with instant response.

We left this place reluctantly, to go back to Tuolumne Meadows. The walk along the plateau in the cool morning air was a pleasant contrast to the warm afternoon of a few days before. There were the same views of the Merced Range and the same trees, yet they looked different in the early light. Instead of returning by Babcock Lake, the trail led up the Maclure Fork, under tall trees along the waterside, to a camp at the foot of Vogelsang Pass. Bernice Lake, above the camp, attracted those who yearned for more activity, and its quiet beauty, surrounded by low trees, offered coves for lunch, siesta, or swim. The climb next day, over the pass into the morning sunshine, under the jagged buttress of Vogelsang Peak, with dark stretches of distant forest coming into view, brought to some of us memories of another day twenty years ago.

That day, in 1914, under lowering skies which threatened a heavy storm, we had plowed our way across what seemed an endless snowfield far down Rafferty Creek. No lingering looks were cast around that day for a spot in which to make tea and spend a soporific hour or two, for steady attention was required to avoid the pitfalls made by melting snow. Without detracting in the least from the prowess of the climbers of 1934, it must be said that conditions have been extraordinarily good for climbing in the past few years. In 1914 Dana had a long snowfield to be passed over before the top was reached. Acres of snow lay on the ranges, and meadows were wet with the melting mantle. Thunderstorms were of almost daily occurrence. In that year a party crossed Parker Pass by an indistinct trail, and at the end of twenty miles, in the face of snow-covered Gem Pass, was forced to camp on a cliff. Next morning they stamped out a trail over the pass for the mules. I doubt if the keds and shorts of today would have proved very comfortable that year.

An even greater contrast between 1914 and the present day was impressed upon me this summer. In 1914, if the Tioga Road had been something more than two faint ruts, and if that combined convenience and curse of civilization, the telephone, had been hanging

on a tree at the Soda Springs, we might have heard ominous rumblings. As it was, we went blissfully on to plan a knapsack-trip down the Tuolumne Canyon, a real feat in those days, and not until our arrival at El Portal did we learn of the developments that were at that moment plunging the world into war.

In 1934, by motorist and newspaper, by telephone and radio, the Meadows were alive with the disquieting news of a general strike in San Francisco. The twenty years' back-wash of war and its economic debacle had reached our mountain playground and some of our trail companions were called home by duty and by apprehension.

Soon the camp was on the march again, trailing down almost to Glen Aulin and up past the nestling McGee Lakes, a leisurely day for those who lunched on Cathedral Creek. A trail-side home that night and a delightful camp-fire in charge of one of our "Brothers" from the South, with songs, a Sierra Day in poetry, readings of Irvin Cobb's best stories, music by talented violinists, and a dancing interpretation of the legendary Rocktivera, sent us off to bed contented with the day. A glorious meteor startled us early in the evening, calling to mind the magnificent celestial visitor over Milestone Camp a few years back.

The move to Ten Lakes was one of those exhilarating days that have a way of standing out, even among a succession of heavenly days. Toiling up a winding trail, beneath lovely trees, we were rewarded at the top by a commanding view. From a crown of rocks we gazed in ecstasy at a great arc of mountains. From the Matterhorn they marched, around to the Merced Range—Conness, Dana, Banner, Ritter, Lyell, Florence—with Echo Ridge and Cathedral Peak rising in their midst. It was hard to tear ourselves away from such inspiration, but presently our thoughts were attracted in other directions as a large snow-patch offered alluring suggestions. Soon sherbet was being mixed and sliders were climbing up and zooming down to their heart's content. By way of contrast, a woodland sprite plunged into the little lake at the foot of the snow, as if to prove that mountain madness does not stop even at snow-water.

A few more miles over ridges and through meadows, amid beautiful woods and flower-gardens, brought us to the brink of a steep cliff. Below lay a long meadow that seemed to be landscaped like a park, with a steep wall of granite on the other side. It was not long before we were in the midst of this park, where the shade of trees by

the river invited rest and refreshment. Here we caught up with a Government trail crew that was blasting out the down timber to enable our pack-train to pass.

Afternoon found us climbing the granite wall we had gazed at from across the canyon a few hours past. The red-barked juniper was at home in this exposed spot, whence all other trees had fled. Splendid specimens clung to the rocks. At one outpost an old patriarch flung its stark branches out in defiance of the elements that must rage around it most of the year. From this spot, even the trail retreated and took its way through pleasanter places, up under firs and cedars, until at last, there lay at our feet an exquisite little lake, which was to be our home for the next two days.

The time was occupied by leisurely walks to the other lakes of the region, or by climbs, if such they could be called, of Colby Mountain and Grand Mountain, with views down into the rugged depths of the Tuolumne. A few hardy souls struck off for the canyon, to venture as far as possible on foot, and then to take to the pools of Muir Gorge. The girls of the party started off blithely in "shorts." Visions were recalled of the knapsackers who essayed such trips twenty years ago. The girls of 1914 wore short skirts on the trail, but when the three or four who were permitted to undertake such a dangerous adventure as a trip down Tuolumne Canyon were told they must wear trousers, mingled doubt and modesty overwhelmed us. Careful inquiry brought forth "spares." Self-consciously, we tried them on, and with deep misgivings set out on the faint trail that went as far as Waterwheel Falls. As we slid down granite and jumped on boulders and bucked brush, the wisdom of our attire was made clear to us. Muir Gorge, on that occasion, was impassable, and would have been so even to the hardiest of our present generation of mountaineers, for the river was then in flood. So we toiled over the buttress that forms the northern wall, descending at one point with the aid of a rope, the only occasion such an accompaniment was used on the entire month's trip. Pate Valley gave us the feeling of complete isolation, for no trails went that way. Later we camped, for the last time, in Hetch Hetchy Valley.

Our stay at Ten Lakes was memorable for a camp-fire by the lake, with the moon and the stars reflected in its depths. The commissary "children" will not forget the party given them by one of the "old-timers," when the welkin rang with shouts and laughter.

Soon we were backtracking to the South Fork of Cathedral Creek, an easy day. The long granite slide, down which the creek wandered, lured some of us from the beaten track. With a warm granite slope, a pool, and a gentle waterfall running into it, the world is well lost. Only a positive wrench can break the spell of such a spot. The urge of luncheon and the refreshing tea-can bubbling on the pungent fire are hardly temptation enough. But even such perfect relaxation must end, and with the waning afternoon we sought the nearby camp. The Freshman Show cleverly burlesqued a radio performance, but the *pièce de résistance* was "Ghandi," and his goat which miraculously produced milk for this pseudo mystic of the mountains.

Over the ridge to the McGee Lake trail next morning, then a delightful cross-country jaunt, and we were back at the Soda Springs. Refreshing lime-juice sodas were proffered, and newcomers from the big cities assuaged our fears as to conditions at home.

Newcomers joined us at the Tuolumne camp, and the next few days were spent in welcoming them and in speeding old friends on their way with promises of a later renewal of happy associations. Colonel Thomson, Superintendent of the park, and a large group of his rangers were greeted at our camp-fire.

With the beginning of the second portion of the trip, we were off once more down the Tuolumne to Glen Aulin. Our route now turned northward up Cold Canyon and over into Virginia Canyon, with an objective far up Matterhorn Canyon. The Tuolumne region is fascinating with its deep ravines and forested slopes. We had occasional views toward Matterhorn Peak and Sawtooth Ridge, and the day came when we were at home in the highest timber at the head of the canyon near them. Here the men were encamped in the open by the creek, while the women clung to the hemlocks which wandered up the cliffs. But, after a long day's ramble, one can sleep even when propped against a tree.

On the skyline, the jagged silhouette of the "Teeth," with the square block of the "Doodad" resting on one peak, held the mountaineers in hypnotic allurement. Rumors of a birthday-cake left on the most inaccessible pinnacle served as a special attraction. At all events, all shapes and sizes of mountaineers dangled from those sharp granite spines during the daylight hours, and many new recruits were added to the "Polemonium Club."

Sierra honeymoons have changed, too. In 1914 a honeymoon

couple were on the outing, but they stuck safely to the trails. This time a gay pair, ropes on shoulders, appeared out of the dusk at dinner-time, craving hospitality for the night. Like babes in the woods, shelter was showered on them. Ponchos, blankets, and camp comforts gave them assurance of a pleasant stay among friends.

Now, came another of those days which are thrown into highlight above the rest. Matterhorn camp was left behind as we slowly toiled up the steep side of the canyon, leaving the packtrain to take the long trail to Benson Lake. Zigzagging up through the trees, with fine views of the canyon and the mountains beyond, the parties at length separated, some to go over the high granite cliff to the left, others electing the route straight ahead. Great white clouds crossed the sky at intervals, while in the distance the deep blue of Mount Lyell held our fascinated eyes until it almost seemed that we could not turn away. A gentle slope under a red sandstone wall led us off a steep cliff. No sign of a trail was to be found in this hidden region, only a little stream to guide us. So soft were our footsteps that a sleeping fawn did not even stir as we approached. For long minutes it lay, seemingly content and unafraid, then suddenly bounded away to join the frightened doe cowering in the woods above us. Water leaped down an abrupt slope, through flowers and trees, and joined a larger stream in the Big Meadows below. Never had I really understood John Muir's ecstasy until I wandered through this little valley. With all the feelings of explorers, we gazed at the magnificent walls surrounding us, felt the lush grass under our feet, and bowed to the spell of the grove by the tranquil crystal stream. This is a hidden gem in the heart of the Sierra, all the more satisfying because it is still untracked.

The most dramatic part of the day was still before us, however, for presently the stream cut into a gorge. An almost obliterated Indian-trail, to which our feet naturally found their way, follows along the steep sides. At first the way was fairly easy, but at length we had to take to the stream bed. Jumping rocks, climbing boulders, entranced all the time by the grandly sculptured cliffs above us, we arrived at length at Benson Lake camp, weary, but superbly satisfied with the day.

At Benson Lake our Sierrans gave themselves up to swimming, beach sports, resting, and sun-bathing on the lovely white beach. There were some, however, who refused to surrender completely to

these charms, and sought instead the beauties of Rodgers Lake or Seavey Pass.

A red cliff across from the stream-bank made an ideal out-of-door theater for mountain acrobatics. The experienced and the novice climbed the abrupt sides with the aid of ropes, to the admiring awe of the groundlings, and something of the fascination of this new technique crept over even the less daring of the observers.

It was here at peaceful Benson Lake that the party was saddened by one of those unpredictable, unpreventable accidents. Miss Florence Hendra, a new club member, slipped and was drowned before aid could reach her. Everyone appreciated the dignity with which this tragic event passed into club history, and soberly the camp resumed its accustomed ways.

The time came all too soon when our faces were turned toward home. The rising trail, with Volunteer Peak looming above, the lakes, with the mirrored surface of early morning, the streams, and the trout frying for luncheon, the deep pool and the splashing waterfall, all merge as a last synthesis of exquisite pleasure. Little vignettes appear in retrospect—the joyous figure, head bound in gay bandana, the beribboned guitar, and a rich voice, singing songs of the homeland; the bright circle of the packer's camp-fire; Dan, hovering over his steaming pots, surrounded by busy helpers; "Tarzan" and the Packer; an iridescent humming-bird, quivering above an orange handkerchief; a group of "Greek Tragedians," a slender singer, sending a flute-like voice into the starry night—another outing becomes a precious memory.

CATHEDRAL CREEK AND MUIR GORGE, 1934

By LOUISE HILDEBRAND

AFTER a week and a half of continuous mountain-climbing, I felt like a sky-rocket in reverse as we headed down, down, down into the Tuolumne Canyon. But "gorging," though quite the opposite of mountain-climbing, proved none the less exciting. Passage through a gorge is more hilarious than majestic. It is a round of scrambling, wading, plunging, and swimming—a sort of game, that becomes more and more fascinating with each forward maneuver. Momentarily the attention wanders upward to the awe-inspiring view overhead, then back to the game against the water. A false hop, squirm, or paddle may be discomfiting in the extreme, but each plunge is glorious fun.

On July 18th five members of the Outing party set out from the Sierra Club camp in Ten Lakes Basin—Francis Farquhar and Marjory Bridge (veterans of the Muir Gorge party of 1931), Mary Saylor (from New York), "Tony" Chorlton (from New Zealand), and myself. Our route to the Tuolumne lay across country, down Cathedral Creek Canyon. Possibly not more than a dozen people have beheld close at hand the wonderful pools and waterfalls that mark the course of Cathedral Creek on its drop of almost two thousand feet into the heart of the Grand Canyon of the Tuolumne. For a short distance below the junction of the South Fork it wanders gayly among thickets and flowers in a comparatively placid course. Here we stopped for lunch, a swim, and a siesta on a wide sloping "beach" of rock, where we were tempted to linger. As we resumed our way, we felt as if drawn by a magnet to the very middle of the creek. The whole trip, indeed, was characterized by a powerful attraction to the water, so clear and beautiful was it, and so refreshing during the warm days. But, alas, we soon found ourselves checked by a series of perpendicular waterfalls and round bowl-shaped pools. The latter appear to have been hollowed out by huge balls of rock that have been swung around and around in the bedrock. Between the bowls the water becomes a narrow thread as it slides down a V-shaped slope or plunges over a sheer cliff, so that the whole resembles a chain of beads.

At first we were able to circumvent the falls by means of a little rock-climbing or clambering along the canyon-walls; but presently the walls became impassable, and we were forced to climb out onto the brush-covered slope some distance above. Progress now required laborious boring through thickets of brush, chiefly manzanita, a natural form of barbed-wire entanglement. More than ever, we tried to get back to the creek, but the steepness and smoothness prevented. A descent in the stream-bed would no doubt be possible by roping down on pitons; otherwise it is limited to water-ousels.

At last we came out on a slope of clearer ground, which afforded an easy slide down to the Tuolumne. Before leaving Cathedral Creek, however, we visited it once more at a point just above its junction with the larger stream. There we discovered a gem of surpassing size and symmetry, that hangs like a locket on the end of the chain. The final waterfall descends in a trough, resembling a dissected funnel, which shapes the water in a long slender wedge, narrowing as it goes down. At the bottom it pierces the side of a huge circular pool. In the twilight, the pool had a luster like a piece of obsidian. As we approached, a water-ousel flitted up over the ledge above. It was as if Cathedral Creek were asserting its individualism with a final flourish before losing itself in the Tuolumne.

It was a joy to plunge into the water again as we forded the Tuolumne. A short distance down the trail we made camp beside the river. We left a note and an arrow on the trail for Bestor Robinson, who was coming down via Glen Aulin to meet us. About one o'clock in the night a great shout jarred us from our slumbers and we knew that our sign had been found. With Bestor were Kenneth May and Morgan Harris, augmenting our party to eight.

On the following morning we made ready for Muir Gorge. Our equipment consisted of bathing-suits, tennis-shoes, two light cameras, two "movie" cameras, and lunch. The cameras, in water-proof cases, were carried in knapsacks by our two photographers, Marjory and Bestor, who deserve great credit, for the responsibilities of such a job are not light. From our camp to the point where we left the trail just above the gorge, is a walk of about twenty minutes. A short scramble brought us to a fine granite ledge beside a deep pool, and here we left our clothes and took to the river. At first we could hop along the rocks beside the water, but as the banks became cliffs, we plunged in and swam, waded, or leapt from rock to rock in the

midst of the stream. Sometimes this was ticklish business, as the surface tension of wet tennis-shoes is well known to be *nil*, and the current in narrow passages was a torrent. However, no real danger is involved so long as one is careful and doesn't aim one's head at submerged rocks. Once we found a cute little pot-hole, with an exit below water, that made a marvelous plaything; the game was to slide in, go underneath the water, and emerge outside.

But the real excitement comes when you reach the twin waterfall at the very center of the gorge.¹ In 1931, the water was lower and the parties that year had a little less difficulty than we had in reaching the big rock that divides the stream and in roping down to the pool below. On one or two earlier occasions a tree trunk seems to have made a convenient inclined bridge. This year, however, there was no such bridge and the pouring water completely filled the passage down on both sides of the rock. As our route lay directly over the big rock in the middle, we proceeded to make the way safe by attaching a rope to the stump of a tree—the one no doubt that supplied the former bridge. The trick was to enter the pool above the fall and maneuver over to the stump, clinging tenaciously to the side-wall so as not to be drawn into the swift current. From the stump a jump across the brink of the fall brought us to the big rock. From there, all except two of us were lowered on the rope to a small ledge underneath. Francis and Morgan, however, took a short-cut and dived straight into the pool below. The rest of the trip is simple—just a long swim, with the current doing the work, then some more scrambling, till you reach a good place for lunch.

After lunch the party divided, three walking back by the trail that climbs a thousand feet above the river, the others returning through the gorge. The walkers generously carried the packs with the cameras. The trip up through the gorge has the added attraction of a real fight with the water; for the current, which furnishes motive power on the way down, is a rather formidable obstacle as you buck your way up. In the state of the river as we found it, a strong swimmer can make headway without great difficulty by keeping close to the side through the main gorge and by taking advantage of occasional handholds in cracks in the granite for a rest. The very last stretch to the ledge under the jutting rock required our greatest

¹ Muir Gorge is described in S. C. B., 1932, xvii:1, pp. 82-88, and illustrated with photographs.

efforts; but the rope had been left tied to the tree-stump and hung over the waterfall, so we were able to catch the end that dangled in the water and pull ourselves onto the ledge. To get up onto the rock above proved extremely difficult. The first man could not climb up on the rope, since it was in such a position that it would slip and throw him into the waterfall. So, through a system of human props and flying buttresses, a four-man stand was erected, and, after several attempts, Bestor succeeded in climbing to the top of the rock, whence he assisted the rest of us as we came up the rope. From this point on we made rapid progress, and reached the trail in about two hours from the time we started up. The down trip, with the delays incident to the larger party and to the taking of pictures, had taken three hours.

That night for dinner we had beefsteak, imported from civilization by Bestor, served with a brew of rattlesnake, onion, and bacon-grease. It was a dinner fit for the gods. There was salt in the sugar, granite in the soup, rattlesnake in the stew, and I'll never tell what I put into the rice—but still it was a dinner fit for the gods. Fortunately so, for the next morning we had tea without sugar and a little unsweetened applesauce for breakfast, and twelve miles up-hill to Glen Aulin before we could get any more nourishment. We reached Tuolumne Meadows in time to greet the members of the main party as they returned from Ten Lakes Basin.

ROCK CLIMBERS' PARADISE

By DORIS F. LEONARD

WHEN people asked me where Dick and I were going on our honeymoon, instead of blushingly saying, "I won't tell," I very proudly told them that we were going off to the mountains; that we were going to pack in all of our food and equipment for a two weeks' trip, and that my trousseau was to consist primarily of a new pair of "jeans" with a leather patch for roping down, a new parka, a new ice-axe, and plenty of sunburn cream.

We arrived at Bridgeport, our starting-point, on the night of July 16. We had made arrangements to employ two boys who would be willing to help us pack in our equipment. When we started early the next morning, Dick and the two porters were carrying fifty pounds each, while I carried twenty-five pounds. The three-mile climb from the lakes to our camp was a hard one, up three thousand feet, through brush, and over talus, with some relief at the end as we mounted beside sparkling streams and through fragrant pines. We had been on our way for seven hours when we finally reached our camp at an altitude of 10,000 feet. As it was getting late, our porters had to leave immediately on their return trip. Watching them go, we realized that when they went from sight we would be completely alone, with very little likelihood of seeing anyone else until we went back by the same route.

By this time the sun was painting with a deep rosy hue the tips of the spires that surrounded us. We were very, very tired, so we unpacked just the necessary things, leaving the rest for the next day, when we should have renewed vigor and plenty of time. It was a very simple dinner to which we sat down.

As the twilight deepened, we looked off across the distance together. I was frightened. Great tears welled up in my eyes. I felt so small and overpowered as I looked at the tremendous heights around me. I had never spent a night high up in the mountains before, and the silence seemed to be pressing in upon me. I felt walled in. I struggled to shake this horrible feeling from me, and soon felt calmer as I realized that I had someone with me who was thoroughly capable of taking care of me and teaching me and of

showing me the beauties that I had been told existed in this wild country.

The ensuing days sped by. We made for ourselves a wonderful camp. Experienced campers who had been there the year before had said that this location was one of the best in the mountains. The texture of the meadows was so close and fine that I was reminded of old Chinese rugs as my feet sank deep into their softness.

After a day or two of rest, we shouldered our packs one morning and, with ice-axes in hand, started off to see what we could see. We decided to traverse as far as we could the arête from Three-Fingered Jack south to the high point of the ridge. We had a grand time climbing up and down, over and across the sharp rocks, exploring nooks and crannies, sitting down in the shade of some immense boulder to admire the view, until it became time for us to start back to camp. We roped down over an overhang for about a hundred feet, coiled our rope, and pioneered our way down a steep gulley to camp. By this time I was wondering how I ever could have been afraid of the mountains.

During these days I was being taught many new things, one of them the use of the ice-axe. Nearby were some snow-patches, where Dick taught me how to hold the axe, how to glissade, and how to correct a fall. Before long we were up on the glacier itself. One day we climbed from the glacier to Cleaver Peak — a second ascent. Another day we made the first ascent of the most prominent rock-peak on the Cleaver Ridge, which we named Spiral Peak because of the route. It was not a very difficult climb, but it served to break me in for severer things.

I had been a member of the Sierra Club for only a little more than a year, and the only rock-climbing I had done had been on the weekend meetings of the Rock Climbing Section. I was, therefore, at first somewhat timid about attempting the difficult climbing necessary to gain the summit of the Three Teeth. However, toward the end of our trip, when Dick suggested that we climb the West Tooth, I felt ready, especially with such a thoroughly competent leader who knew enough not to suggest the climb if he did not think I was capable of it. We made the climb and I enjoyed it immensely. Only once on the ascent was I frightened the least bit, and that was on a traverse out over an overhang with the glacier three hundred feet below. We varied the former route somewhat by eliminating the two-

man stand onto the summit block. Instead, we found a very narrow ledge, about two inches wide, near enough to the top to allow us to pull ourselves up onto the summit. It was a third ascent.

Just as we climbed onto the summit, Jack Riegelhuth and Glen Dawson climbed onto the summit of the Middle Tooth. Two weeks before, Kenneth May and Howard Twining had climbed the Teeth in order to get the birthday-cake that Randolph May had left for his brother the year before.¹ Jack and Glen called over to us that there was a piece of cake left there with a note: "Reserved for Mr. and Mrs. Richard M. Leonard only." They asked our permission to take a piece of this former birthday-cake, now a wedding-cake. We gladly gave our consent, and invited them to come over to our summit for a visit. They made the traverse down to the notch between the Middle Tooth and the West Tooth, and then up the very difficult east side of the West Tooth. This was the first time that the traverse had been made from east to west, and it took them about one hour and a half to complete the climb from one peak to the other.

When the boys arrived on our summit, they told us that the Sierra Club Outing camp was located in Matterhorn Canyon, about four miles from where we were. They urged us to go back to camp that night with them, spend the night there, and return to our camp the next day. We protested, for we had made no provision for staying away from camp overnight, and had left our knapsacks and ice-axes on the glacier below when we started to climb. However, they persuaded us to change our minds, assuring us that everything we might need would be furnished. We were delighted with the prospect of meeting again so many of our friends high up there in the mountains.

After roping down four hundred feet to Slide Canyon, we finally arrived in camp, dirty and tired, and were greeted happily by everyone. We were introduced to many of the people we had heard so much about but had never had the pleasure of meeting, including Francis Tappaan, Norman Clyde, and Dan Tachet. Tap welcomed us to camp and made us feel very much at home. Everyone was wonderfully kind to us, and I do believe that we had more bedding that night than anyone else in camp. *

The next day we started back to our home on the other side of the Sawtooth Ridge. We climbed up to the "Col de Doodad," roped

¹ See "Three Teeth of the Sawtooth Ridge," by Richard M. Leonard, in S. C. B., 1934, xix:3, pp. 31-33.

down the very loose scree in the chimney to the place where it dropped off to the glacier a hundred feet below. Here we found the piton used by Robinson, Beers, and Leonard the year before. It was still in good condition and we used it for roping down onto the glacier. We had to be constantly on the lookout while crossing the snow and ice, because it was the time of day when large rocks were being catapulted down the mountainside by melting snows.

This was the last climb of our trip, for the next day we had to start back home. We were very sad as we took leave of our familiar peaks. In the two weeks that we had been there many changes had taken place, both in me and in the country. Springtime is short in such high altitudes, and the dainty cassiope-bells were turning brown with the change in the seasons. For my part, I had come there two weeks before an absolute novice in mountaineering; I now felt that I could take my place among people familiar with mountains and mountain lore.

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KEARSARGE PASS

BY ELMO A. ROBINSON



IT was easy to make the climb
Up from Bullfrog Lake and over Kearsarge Pass,
Thence quickly to descend the trail to Onion Valley
Where the road began.
Soon there was a chance to ride;
A friendly Irish couple with their "model T"
Picked me up, gathered elderberries,
And killed a rattlesnake.
So on to Independence,
Eighteen miles perhaps from camp
And seven thousand feet below the pass.

The return was not so easy.
"Nearly every evening," so they said,
"Someone drives to Onion Valley."
On the corner in the heat and in vain I waited,
Then at sunset began to walk.
The desert sloped, an inclined plane,
Upon which at infinity stood the mountains.
Three variables dimmed and lessened imperceptibly:
The intervening distance, the heat of the day,
And the twilight.

Dusk and a friendly ranger
Arrived simultaneously;
The dusk, unconscious of destiny or purpose,
The ranger bound for Gray's Meadows.
The lift, though short, was welcome.
The higher air was cooler, fresher,
And the moon at my back, free and fair,
Shone its searching beams before me,
Illuminating the still distant peaks.
Soon I passed through Seven Pines
To the ridge beyond and above.

Now the valley spread itself below me.
The lights of Independence competed with the stars.
Some, moving northward or southward, traced the populous highway;
Some, turning westward, promised an end to my walking.
Out from town for seven miles or more
I could follow their journey,
But none came beyond the Meadows or the Pines.
After each disappointment I would walk again
Until the disappointments ceased to disappoint.
Thus I continued, leisurely,
Along the highway's winding course,
Past the darkened cabin of a miner,
Drinking in the profile of each peak and crest,
The moonlight, the quietness, the universe of beauty.

For a time the road, crossing the creek,
Took me out of the moonlight
Into the strange darkness of the narrow canyon;
Then back into the light again,
Where I chose the shorter, steeper trail.

No one roused in Onion Valley
As I passed through,
Not even the barking dog who had greeted me earlier.
Only a horse, staked beside the stream,
Seemed surprised.

The road left behind,
It gave no choice but steepness.
A terminal moraine there was to cross,
A lake to walk beside,
And then another slope to climb.
Fatigue stole on too quickly,
And, with fatigue, illusions.
The magic moon transformed the rocks and trees,
Animating them with fancied shapes and motions,
While the crunch of my cane in the decomposed granite,
Followed by another accented crunch
As I trusted my weight upon it

Kept calling up the imagery
Of the brilliant syncopated chords
Of Schubert's Unfinished Symphony.
At last, the moon three-fourths along its open course,
I sought the shelter of a large rock,
Feebly dragged together a few logs,
Built a small fire,
Stretched myself beside its warmth,
And dozed the hours away.

At dawn I started on again,
With perhaps a mile to reach the pass.
The moon had gone that way before me,
Disappearing over the crest.
But now advance rays from the rising sun
Colored the eastern sky,
Tinting the topmost peaks above me.
Still fatigued I trod on—
Fifty steps, and then a pause for breath;
Fifty steps more, and again a pause.
Thus, slowly, I neared the pass.
And slowly the sunlight came down the hill to meet me,
While the lake nestled near the summit
Slept on in shadow,
Still covered by the robe of night,
Unconscious of the incipient day.
Just as the diminishing shadow was about to uncover me
And I should step out of night and into day,
Mounting to the crest faster than she could retreat beyond it,
I overtook the moon—
Sunrise from the east and moonrise from the west
Almost synchronizing.

The pass gained,
I could watch the day dawn now on the western slope.
Kearsarge Pinnacles were awake,
But not the mirroring lakes.
They had not yet greeted the sun,
Nor had the spot where my companions slumbered.

Hurrying down the uncertain trail,
The sun and I reached their camp together.
They crawled forth from their blankets
As I crawled into mine—
They to eat and I to sleep—
And thus another day began.

FROM YOSEMITE TO KINGS RIVER CANYON, 1896

BY WALTER A. STARR

UP to near the end of the last century, very little was generally known about the High Sierra region extending southward from Yosemite. There were no reliable maps of this area. There were five trails crossing the mountains from east to west, separated by wide intervals, which had been Indian trails before the white man came. They followed the easiest routes up canyons and along ridges and crossed the most accessible passes. On the north was the Mono Lake trail, following the divide between the Merced and Tuolumne rivers to Tuolumne Meadows, over Mono Pass and down Bloody Canyon to Mono Lake, the land of the Mono tribe of Indians. Farther south there was the Mammoth trail, traversing the forests and meadows of the northern tributaries of the San Joaquin River, up the north side of the Middle Fork of the San Joaquin, and over Mammoth Pass to the upper Owens River country. Next came the Mono Creek trail which took advantage of the easy country along the divide between the San Joaquin and Kings rivers, extending from the Fresno region to the upper South Fork of the San Joaquin. Here a trail crossed the river, followed Mono Creek to its head, crossed the pass and went down Rock Creek to Owens Valley. Another route ascended Piute Creek to its head, crossed Piute Pass, and descended Bishop Creek to Owens Valley. Owens Valley was the land of the Piute Indians. It was a long jump to the next crossing at Kearsarge Pass—the intervening Sierra Crest is high and rugged. Here the trail worked up the divide between the Kings and Kaweah from the San Joaquin Valley side, then gradually worked down into the Canyon of the South Fork of Kings River, following up by way of Bubbs Creek to the pass and on down to the Owens River Valley. The roads and trails of today follow these routes.

Other lateral canyons and ridges were followed by sheepmen and miners going into and out of the mountains, but there was no known route or trail running north and south along the high mountain area over which pack-animals could travel from Yosemite to Kings River Canyon.

During the early 1890's the wonders and beauty contained in the

little-frequented high-mountain area of the Sierra were gradually being made known through the explorations and writings of John Muir and a few other lovers of Nature's beauty. The Sierra Club had come into being. Many of its most enthusiastic members were professors, alumni, and students of the University of California. During the summer vacation of 1894 I was in the Yosemite region with a large party of college mates—a year memorable to those who were present at the large camp-fire gatherings in the valley, presided over by our dear Professor Joseph Le Conte and attended by many who have since done their bit not only in mountaineering but in many other walks of life. Herbert Hoover, of Stanford, was among them.

I spent the summer of 1895 in what is now the northern part of Yosemite National Park with Allen L. Chickering and some other students. Having become infected with Sierra Club enthusiasm, we determined to make a trip of real exploration during the college vacation of 1896. We met Theodore S. Solomons, who had made several trips of exploration, and had contributed to the data being collected by the junior [J. N.] Le Conte, who was then, as afterward, tireless in exploration and mapping of the High Sierra region, which then was largely a blank on the map. A map had been published by the Sierra Club in 1893, naturally a rather sketchy affair, amplified in a new edition issued in May, 1896.¹ The idea of a High Sierra route from Yosemite to Kings River Canyon was being talked about, and Solomons, Chickering, and I decided to attempt such a trip with pack-animals, search out the highest possible route, and get what information and data we could of value to the Sierra Club. Solomons took along a $6\frac{1}{2}$ x $8\frac{1}{2}$ tripod camera which was a pack-load for a man in itself. This camera used glass plates, and the wooden box in which we carried the twelve dozen plates weighed, according to my recollection, about seventy pounds. We carried this precious load on top of a pack between the saddle trees, and it has always seemed to me a miracle that we got back with the plates unbroken, considering what happened to the horses and the packs. After exposure, the plate slides of the camera were changed at night under cover of a blanket, and reloaded. We also had a small kodak—the crude type of those days. Unfortunately the unusual weather we experienced (of which more later) prevented our getting many of the pictures we most wanted. The seasons during the eighties and early

¹ Publications of the Sierra Club, Nos. 4 and 5 and No. 12.

nineties were in a stormy, wet cycle, unknown to the present younger generation. The high mountains then presented a wholly different appearance to what they do now. Huge snow-fields and accumulated drifts lasted out the summer at high altitudes and the glaciers were much larger. Perhaps due to this condition, summer storms were much more frequent and more violent. During the time of our journey from Yosemite to Kings River Canyon we had violent electric storms, with heavy rain or hail on more than one-half of the days we were out. This was a great handicap to our efforts, and added much to our difficulties, which were many. While our luck caused us to fall short of what we hoped to accomplish, Chickering and I succeeded in making the trip to our destination, and completed the first high-mountain journey from Yosemite to Kings River Canyon, so far as I have any knowledge.²

On our return, with the generous assistance of Mr. Solomons, a lantern-slide description of the trip was given by me in a hall in San Francisco before a large gathering of Sierra Club members and their friends, showing the pictures we had taken and the route traversed. Tehipite, in the canyon of the Middle Fork of the Kings, seemed to have special interest for the audience. It was a surprise to most people to know that another canyon existed which rivaled in grandeur, and surpassed in depth and ruggedness, the then known Kings River Canyon (South Fork). I was fortunate in having obtained a lucky picture of Tehipite Dome, just at sunset, which did credit to the mightiness and yet stately beauty of this great dome of granite—if the occasion had been a bathing beauty contest, Tehipite Dome certainly would have been acclaimed Miss California by my audience.

During the years following, many trips of exploration were made by members of the Sierra Club, the records of which are largely contained in the SIERRA CLUB BULLETIN, until, in 1915, came the naming of the John Muir Trail for the man who had done so much to inform the world of the wonders such a trail would reveal to those who would follow it. The history of the trail since then is known—at least to members of the club. In some regions traversed it is proper that there should be a lower trail to fit the seasons and the time of year in order to make the mountains accessible, yet it

² Theodore S. Solomons mentions this expedition in "Explorations in the Sierra Nevada During the Season of 1896" (*Appalachia*, 1897, viii:3, p. 243), but does not give a precise account of the journey of Chickering and Starr to Kings River Canyon.

seems most fitting that the *John Muir Trail* should, from end to end, traverse the highest and the grandest regions. There are still two sections to be completed to accomplish this: one over Mather Pass from Deer Meadow, the other from upper Mono Creek to Evolution Basin, through the high country. There is still work to be done. This conviction is supported by the comments made by my son, Walter A. Starr, Jr., in his "Guide to the John Muir Trail." Few have traversed nearly all of the trails of the High Sierra and the regions they lead to as he did. His book makes the same plea for the Muir Trail that I do.

The account of our journey in 1896 has been resurrected out of a diary kept by Mr. Chickering, notes and a map by myself, and then filled in by recollection. It happened thus:

Late in May, 1896, at the close of college, Chickering and I, with packsaddles and outfit, proceeded by rail and stage to the town of Sonora. Here we purchased four well-seasoned pack-horses recruited from the cow-men who yearly drove their stock up into the meadows north of the Tuolumne. Starting out, we followed the road to Sugar Pine and then struck out on the Lord's Ranch trail, crossing the North Fork of the Tuolumne, Clavey River, and Cherry Creek, all in flood from melting deep snows, and came to camp at Lake Eleanor. We experienced great difficulty in crossing these streams, which were then swollen rivers. Once, while Chickering was carrying part of the outfit across on a huge fallen tree, over which the water was running, and I was leading the packs across, riding the lead-horse, the animals were nearly swept from their feet. At Cherry Creek we carried the outfit across on log-jams, but could not induce our horses to swim the river. Finally, we threw a strong cord across the stream, tied all the pack-ropes together and fastened them to the end of the light cord, and, by climbing trees on opposite sides, were able to keep the rope clear of the stream until it reached across. A victim was then selected from the horses and made fast to an end of the rope. Once in the swift current, he had to swim or be snubbed across, as the other end was passed around a tree. Using this animal as a decoy, we succeeded in getting the others to swim across. At the next crossing Chickering tried a new method by swimming ahead of a horse. It proved a dangerous experiment, as the animal nearly struck him under with its fore-legs.

We had time to kill, as we judged by the heavy snow we could

not make our start out of Yosemite until July. So we hunted and fished. Lake Eleanor was stocked in early days by a cattleman named Kibbie, who packed the fish from Cherry Creek to the lake, carrying them in coal-oil cans. When we were there the fish were very plentiful. Proceeding on our way to Yosemite, we had much difficulty getting through Hetch Hetchy due to the high water in the Tuolumne. In Yosemite we met the third member of our party, Mr. Solomons, and, having completed our outfit, set out for Kings River Canyon. The account of our journey, which follows, is taken largely from the diary:

July 3d: We left Yosemite at noon on the Nevada Fall trail. Crossing the bridge at the head of the falls we turned up the river on the south wall around the east face of Starr King. We struck an old sheep-run and followed it a way, gaining altitude, and then struck out through brush until we crossed a small ridge, from the top of which Little Yosemite appeared directly below us. We turned to the right along the side of the mountain above Little Yosemite.

The going became rough. One of the horses balked, and we unpacked him and tied him up, wishing to reach the rim for camp before dark. Our progress became slow, and at dusk we reached the end of a ledge we had followed and it became necessary to climb a steep granite slope to a higher ledge. Only one horse made the climb safely (the one with the camera plates); the other two fell at the top and slid back, losing their packs. It was now nearly dark, so we camped where we were. No water. We made a meal of canned salmon, chocolate nuts, and raisins, and piled brush at the edge of the widest ledge to make a place wide enough on which to make a bed.

July 4th: At dawn we had a breakfast similar to our dinner, then got the horses out without packs up to the rim above the canyon, where there was a small meadow and stream. The balky horse was packed but suffered the same fate as the others on the granite slope. We set about carrying our outfit upon our own backs, when it began to rain heavily, so we covered up the provisions and carried up our beds. The rain continued into the night. We were well soaked and sought shelter under some rocks. About midnight the rain came in torrents and Starr awoke in a stream of water which had invaded his shelter. Chickering was more fortunate, being in a dry place, and so took in his soaked and chilled partner under the blanket, where they listened to the downpour until dawn.

July 5th: Seeking shelter, Chickering found a huge flat rock near by, held up by other rocks, with dry wood a plenty under it for a fire. With a fire we warmed ourselves and dried our clothes and bedding, and cooked our first good meal. The rain slackened, so we built a trail up from the ledge and packed up the outfit to our rock house, where all was dried out and saddles mended. The rain finally stopped late in the afternoon.

July 6th: After a fine breakfast, and with a dry outfit, we started out and ascended the divide between Starr King and Mount Clark, which we followed to a stream coming from the heights of the latter. We followed down cascades about a mile to find a crossing. Having crossed we turned up-stream, gradually working up onto the divide between the stream and the Merced. We crossed at 9800 feet elevation and descended on a snow-field toward the Merced, then followed a point down the slope, turning up the Merced near the rim of the canyon to make a camp at Dry Lake.

July 7th: We continued obliquely toward the Merced and just before reaching the stream coming out of the basin below Red Peak, Gray Peak, and Mount Clark, we turned down the wall of the canyon where the stream joins the Merced over beautiful falls. We had some difficulty working the horses down the ledges. The brown horse fell over a cliff and went down some hundred feet, rolling over and over on the pack. We expected nothing else than a dead horse, but, by a miracle, when we reached the animal we found the pack was still on and cut legs the only damage. We found a ford, although the river was high, and then followed down on the rim of the meadow toward Lake Merced to where the Maclure Fork comes in on the north side. We followed up the right side of this stream for several miles and came to a rough place where the cliff seemed to block the way, and there made camp.³

July 8th: Next morning we found a way up over the cliff. We blazed and monumented the way. We then climbed to the top of the ridge between the Merced and the Maclure Fork and followed along above the Merced Canyon. By means of a perfect ledge, extending a long distance, we found an easy route to the crossing of the Lyell Fork of the Merced, which dashes down a long cascade to join the river, and was particularly beautiful on account of the high

³ The route from Yosemite to Merced Lake via the Clouds Rest trail and Echo Creek, on the north side of the Merced, had not been located at this time.

water. We crossed the Lyell Fork in a driving storm and ascended along another perfect ledge which obliqued upward from the stream to the next divide which we crossed at 10,000 feet elevation. These two long ledges are a made-to-order route in and out of the Lyell Fork, which otherwise would be difficult.⁴ When we reached a stream coming from a basin extending to the crest we camped, and the rain stopped. We built a big fire and dried out our soaked clothes.

July 9th: We traveled up and above the highest fork of the Merced to its source, passing a number of ice-bound, snow-surrounded lakes, and just beyond crossed the summit of the Merced-San Joaquin divide over a deep snow-field at about 10,500 feet elevation.⁵ Here, Solomons photographed the Clark range and the Ritter and Minaret peaks.

One of the horses fell through the snow where a rock protruded so that the pack was level with the snow. We unpacked him and then got him out. Below us, to the south, a fork of Granite Creek, a branch of the San Joaquin, took its source in some lakes. We descended over the snow-field toward the basin. As we left the snow a terrific electric storm came on. Lightning struck several times very near us, the thunder-claps were deafening, and hail fell in such fury and size as to hurt our shoulders, as we were wearing no coats. We hastened to get down into the basin for shelter and safety, but there soon came a cloudburst which brought a torrent of water down the slope. Rocks came rolling with the water, and one about a foot in size crashed under and between the legs of the pack-horse Starr was leading. The whole slope became a torrent of water, and the depressions were so deep and the water so swift as nearly to sweep us off our feet. We finally reached a meadow just beyond a lake, made camp under a huge overhanging rock in some talus, gathered some pitchy tamarack roots and got a big fire going to dry us out, not getting to bed until late into the night. During the night pack-rats played havoc with our clothes and carried off some things.

July 10th: We spent the morning drying out our outfit, clothes, and bedding. We started out down the stream (a fork of Granite Creek) on the east side. We had not gone over two miles when another awful storm broke, lasting about three hours. About five o'clock we came to the Mammoth trail and camped at a meadow.⁶

⁴ The Isberg Pass trail now follows this route.

⁵ Isberg Pass.

⁶ This route from the pass is now the Little Jackass trail to Soldier Meadow.

July 11th: We left the trail and continued down the east bank of Granite Creek. No trail, but easy going. We climbed to the ridge between Granite Creek and the Middle Fork of the San Joaquin and photographed Balloon Dome, which rises from the gore where the deep canyons of the Middle Fork and the South Fork meet. We then descended to the Middle Fork on a sheep trail and camped at the Miller and Lux sheep bridge—a big tree felled across the river. The horses crossed with less trouble than we expected.

July 12: We left the Miller and Lux flat and climbed out of the canyon to a camp several miles beyond Castle Meadow. One of the horses, called "Ribs," older than the others, gave out completely, and we divided the pack among the other three and left the animal in the meadow with the hope that it would regain its strength and be rounded up with the Miller and Lux stock in the fall.

July 13th: We started out early and traveled all day. Passed out of the Miller and Lux range about noon and failed to find a trail said to lead to Mono Creek. However, we experienced no difficulty in finding a route, and camped about three miles from Mono Creek.

July 14th: Reached Mono Creek about noon in a large parklike valley, shown on the map as Vermilion Valley.⁷ We unpacked in a fine meadow, cached everything in some rocks at the edge of the valley, hobbled the horses and turned them loose. We made up knapsacks for a few days' trip, including Solomons' camera and some plates. We climbed up the east side of the canyon about two thousand feet above the valley and camped on a small stream.

July 15th: Traveled up the divide between Mono and Bear creeks to the head of one of the deep recesses which drop down into Mono Creek. Climbed down a steep snow-bank into the recess and camped on Mono Creek. A storm came up with heavy rain.

July 16th: Went up Mono Creek to the pass over the crest. We climbed a peak above the pass about 13,000 feet in elevation. During the climb Solomons became very ill and decided to wait while we finished the climb, in order that some photographs be taken which he was anxious to get from the summit. We had a fine view of Mount Abbot, south to Mount Humphreys, and over Inyo and Mono counties to the White Mountains. In the other direction were the peaks north of Mono Creek including Red Slate Peak and Red-and-White Peak. We counted seventy-two lakes. There was a

⁷ Named by Solomons two seasons before. (S. C. B., 1895, 1:6, p. 227.)

thunderstorm in progress to the east, and while Starr was taking photographs and focusing the camera a large cloud passed over us. Suddenly everything began to buzz like an electric car in motion. The camera tripod, our fingertips, and even our hair, which stood out straight, seemed to exude electricity. We were badly frightened, and got off the peak as rapidly as possible. We called this point Electric Peak. Joining Solomons, we descended to our camp of the previous night. It stormed again during the afternoon, but the rain stopped at nightfall.

July 17th: Spent the day returning to our cache. Solomons still feeling ill. Found everything undisturbed and the horses near by.

July 18th: We crossed Mono Creek, riding across a ford on top of the packs. Climbed over the ridge to Bear Creek, and then along a sheep-trail until we crossed a granite ridge which took us some time to get over. Going down the other side we saw before us Lost Valley, or Blaney Meadows, and came to a beautiful lake with water-lilies galore, which we named Florence Lake after Starr's sister. Camped at the lower end of the meadow.

July 19th: Packed up to the upper meadow in about an hour to Big Hot Springs which is the permanent camp of Shipp and Bell, sheepmen. Found Mr. Bell and a herder, who invited us to camp for a feast of fine mutton, an invitation which we gladly accepted. We were told that the hot springs had been used by the Indians for medicinal purposes.

July 20th: It was our plan to proceed up the San Joaquin to the Mount Goddard region and try to find a pass into the Middle Fork of the Kings. As Solomons did not feel equal to hard exertion, it was decided that he should remain at the camp and rest while we went to Goddard on an exploration trip, hoping on our return to find that he had recovered from his illness.

Taking only our best horse, "Bally," we went on up the river about ten miles, crossing the north branch of the South Fork (now called Piute Creek) on the way, and then crossed the main river, continuing up the south side past the mouth of the middle branch of the South Fork (now called Evolution Creek) to a point below Red Mountain, where we camped. We blazed and monumented our trail up the river. As we were cooking dinner, a man rode into camp on a mule and was surprised, but glad, to meet us, as he had neither food nor blankets. He was a sheep-man who had crossed



CATHEDRAL CREEK FALL, TUOLUMNE CANYON
Photograph by Marjory Bridge Farquhar



LOWER WEST LAKE OF THE TEN LAKES BASIN
Photograph by Ansel Adams

LOWER WEST LAKE OF THE TEN LAKES BASIN
Photograph by Ansel Adams

PLATE XI.

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LOWER EAST LAKE OF THE TEN LAKES BASIN

Photograph by Ansel Adams



WHIRL MOUNTAIN, FROM THE BASE OF SAWTOOTH RIDGE.
Photograph by Ansel Adams

WHORL MOUNTAIN, FROM THE BASE OF SAWTOOTH RIDGE
Photograph by Ansel Adams

SIERRA CLUB BULLETIN, VOL. XX.

PLATE XIII.



LARGE MEADOW ON PIUTE CREEK, YOSEMITE NATIONAL PARK
Photograph by Ansel Adams



RED PEAK AND MOUNT CONNESS
From a Point South of Matterhorn Peak
Photograph by Ansel Adams



SOUTHEASTERLY VIEW, TOWARD MOUNT HUMPHREYS, FROM PEAK NEAR MONO PASS
Photograph taken July 16, 1896, by Walter A. Starr



TEHIPITE DOME

Photograph taken July 29, 1896, by Walter A. Starr

from the North Fork of the Kings, where his sheep were, on a trail called the Baird trail and had come over a pass (now known as Hell-for-Sure Pass) into the San Joaquin Canyon. He was looking for Bell's camp, but was confused in location and had been wandering about the upper San Joaquin. He spent the night with us, sharing our bedding and food, and left for Bell's camp next morning on our back trail. We now knew at least that a route existed from the upper South Fork of the San Joaquin to North Fork of the Kings, from where one could proceed to the Middle Fork of the Kings.

July 21st: We hobbled Bally and shouldered knapsacks, including Solomons' camera. We followed up the canyon where the river comes down a gorge with falls and cataracts. We descended an easy chute and forded the river just above the gorge in swift water. We continued up the north bank a long way to a small lake just under Goddard, from where we made the ascent up a chute filled with snow in which we had to cut steps in places. This brought us out on top of the shoulder of the peak, which we followed up over shale to the summit, arriving there at one o'clock. The view was grand, but after taking one picture a thunderstorm came on and we made the descent in driving hail in fast time, sliding some of the way down the snow. About dusk we reached the ford where we had crossed. The storm had raised the stream and Chickering, who was leading, was swept from his feet and disappeared in the deep water of the pool just above the cascades. Luckily an eddy carried him over to the opposite bank where he scrambled out. Above the roar of the water we consulted, and Chickering went to camp a mile below and returned with the horse. It was now completely dark. Chickering led Bally down the chute to the ford, and when Starr called him the faithful animal crossed over without hesitation. Starr jumped on Bally's back and was carried over to his waiting companion. We found camp in the pitch darkness, for which we were thankful, as the day had been a hard one. We had run some of the way from the foot of Goddard to beat the coming darkness.

July 22d: Made a late start as it was storming again. Reached camp at Blaney Meadow about 3 o'clock and spent the afternoon drying our things.

July 23d: We decided to take the sheep trail out to Ockenden's at the end of the Fresno road, from where Solomons could get home.

He had concluded that his condition would not permit him to travel. We made about 25 miles of the 45 that day.

July 24th: Reached Ockenden's.

July 25th: Spent the day at the store, where we met Mr. Winchell,⁸ who gave us a lot of information about Tehipite and the Kings River region.

July 26th: Regretting the ill luck that had befallen our companion, we two set out very early on a route through the North Fork of the Kings region, obliquing away from the trail we had followed from Lost Valley (Blaney Meadows) to Ockenden's. The route took us across Dinkey Creek and then up Laurel Creek, from where we followed a sheep-trail, crossing Laurel and Bear creeks. We passed just above a grove of giant sequoia (now known as McKinley Grove) and camped at a meadow near Deer Creek.

July 27th: We followed a sheep-trail to House Meadow, and then continued without a trail in an easterly direction, which, we figured, would cross the sheep-trail said to go from Hell-for-Sure Pass to Collins Meadow—the sheepmen's route from the South Fork of the San Joaquin to the Middle Fork of the Kings. We crossed the North Fork of the Kings at the upper end of a beautiful meadow, where grew great quantities of wild strawberries, ripé and luscious. We filled our hats and made a fine shortcake. Here we also saw three deer—the first since leaving Lake Eleanor. In crossing the North Fork an amusing incident occurred. Starr misjudged the depth and swiftness of the water at the ford, and, while leading one of the packs across, was swept from his feet in mid-stream. Although the lead-rope was promptly dropped, the faithful horse followed him down-stream. They were swept into a deep pool where both had to swim and scramble out. Everything on the pack was soaked.

We ascended a long ridge to a small meadow, where we camped quite late in the afternoon. Starr decided to try to locate the trail coming over from Goddard Canyon, which was thought to be not far away. He struck out, riding Bally, and headed in a general easterly direction. Mile after mile went by over a forested plateau with no trail. Finally about dusk, when about to give it up, he met the steep trail leading toward Collins Meadow. His guess proved

⁸ LIL. A. Winchell, of Fresno, who, in 1879 visited Tehipite Valley with Frank Dusy and made the first ascent of Mount Goddard.

correct. It was now about dark with a cloudy sky, but he knew the abilities of his little horse, who could follow his own trail night or day and had a dog's faculty of scent. He turned him back on his tracks, and without hesitation the horse took him back to camp.

July 28th: We followed Bally's tracks and met the sheep-trail leading to Collins Meadow. We were now back again on our route, not far from where we turned back below Mount Goddard. We passed Crown Mountain, and at Collins Meadow found a faint trail leading to Tehipite and followed it to the rim where the tremendous canyon of the Middle Fork of the Kings met our eyes. We started to descend with the packs over a rough, steep trail and had only gone a short way when the leading animal fell off a ledge and was only saved from destruction by some brush. We decided to camp before descending, and returned to a meadow above the rim.

July 29th: Took knapsacks and the camera and descended into the canyon—a drop-off of about 3500 feet. Starr went up the canyon to photograph. Chickering came across two fellows from Fowler, fishing, who reported the fish to be plentiful. He asked one of them how high he estimated the Dome. He replied, "Oh, about 800 feet." We made a triangulation of Tehipite Dome and figured it about 3700 feet above the river.⁹ We measured it five times—twice by triangulation from the valley floor, later by barometer on top, and twice by levels with reference to the barometer. Starr returned at 6:30 having taken a sun-set picture of the Dome. The Fowler men kindly urged us to camp with them, but we decided to climb to camp, as our day of return for college opening was nearing and we must keep going. We made the long hard climb out and reached camp at 8:30, the last hour in darkness. After dinner the moon rose, and we looked from a point on the rim into the great canyon and across at the dome and the stupendous south wall. In the uncertain moonlight its depth seemed bottomless. The impression of that view remains indelible in our memories. In our opinion, Tehipite far surpasses anything the South Fork has to offer.

July 30th: Our Tehipite friends came out early and had breakfast with us. Our horses had strayed and the morning was consumed in hunting them. We packed up at noon and camped at Collins Meadow.

⁹ The U. S. G. S. map shows the altitude of the dome to be 7713 feet and the floor of the Valley 4300 feet, a difference of 3413 feet.

July 31st: We crossed Crown Creek and took a route leading over Tunemah Mountain, said to be used in getting sheep into Simpson Meadow. When we reached the top of the ridge leading out to Tehipite Dome we left our horses and walked several miles out to the dome. The ridge narrows to an edge at the base of the dome. Chickering climbed out along a sloping ledge on the west face with one bad place to cross, narrowly avoiding disaster. Starr climbed out the back-bone, where a short steep granite slope, with no holds excepting friction and a lift up onto a sloping rock, was difficult for a green climber. We removed our shoes and socks in order to get traction on the granite. The view across the canyon to the south wall, which rises over 6000 feet above the river, was wonderful. Starr took a panorama of three pictures of the south wall from one side of the dome, as we did not take the camera to the top. We returned to the horses and went on through Blue Canyon.

August 1st: Got an early start, hoping to reach Simpson Meadow. Shot two grouse on the way. Had fine views looking back at the upper walls of Tehipite. On reaching the top of the Tunemah Ridge a grand view met our eyes. The Palisades were directly in front of us, Mount Goddard to our left, and Mount Brewer, more distant, to our right. Five thousand feet below us, and seeming almost under us, was a green patch of color where lay Simpson Meadow. To the meadow we zigzagged and slid down the granite mountain. We felt sorry for the horses. Camped near Dougherty Creek. Starr cooked the grouse, while Chickering, with a "home made" fishing rod, caught a dozen fine trout in as many minutes. We had a great dinner.

August 2d: After some searching, we found a faint trail leading up the ridge coming into the canyon east of Dougherty Creek, which we followed and came to camp at the upper end of Granite Basin about seven. We climbed a ridge and enjoyed the sunset on the Mount Brewer range.

August 3d: Crossed the basin to the east end and went over a low divide to Copper Creek, which we descended on the right bank, arriving on the floor of the Grand Canyon of Kings River (South Fork) about 3 o'clock, completing our trip exactly one month from the time we left Yosemite. We rode two of the horses up the canyon a considerable distance and then hastened down to Fox's at the lower end, where we camped in the evening.

August 4th: We got an early start out of the canyon, but our horses had "slim pickings" the night before and made slow progress. So we camped at Burton Meadows to give them a chance to get feed. Coming up the trail we encountered a huge rattlesnake, the largest either of us have ever seen or heard of in the Sierra. It was huge in girth as well as length, and was coiled in the trail, its head high off the ground, with jaws open wide and fangs protruding, as if to dispute the right of way. I shot off its head. The snake measured well over six feet.

August 5th: We made Sequoia Mills with our tired horses about 2 o'clock, passing through the General Grant National Park, with its magnificent big trees. We sold our three horses for six dollars and slept that night in the stage barn.

August 6th: Took the stage out to Sanger and hired a rig to take us to Fresno. We were a tough-looking pair of citizens. Our hats were delapidated, our clothes rat-eaten and much mended, and our boots about gone. Chickering had one knee-boot burned off above the ankle, which did not help his appearance; but his whiskers far outdid mine, being rather curly, and would have done justice to any sheepherder.

We caught the night train home just in time for the college term. Altogether, we had packed about five hundred miles through the mountains.

FAR FROM THE MADDING MULES:
A KNAPSACKER'S RETROSPECT

BY DAVID R. BROWER

"**I**S there any sugar left for my cornmeal?"
"No, there's no sugar, and there isn't any milk either — until we reach North Lake. You'll just have to get along with the bacon grease we fried our last onion in . . ."

"What! Aren't those beans done yet? Why they've been cooking over the embers all day, since we left this morning."

"Yes, and we've been gone ten hours. You would insist on bringing beans. Oh well, pass some over. I am going to eat, at any cost . . ."

And thus, during the summer of 1933, did George Rockwood and I so thoroughly enjoy our seven weeks knapsacking trip that no sooner was it over than I began to plan for another. In May, 1934, it was time to go again. Unhappily, George was detained by work and a sense of responsibility to it; but Hervey Voge, whom we had met in Humphreys Basin in 1933, was well acquainted with knapsacking, and had long since planned to be with us. So on May 18th, having shipped provisions for forty-eight days ahead of us to Glacier Lodge (on Big Pine Creek) and to Independence, Hervey and I loaded an additional twenty-five days' supplies into the car, and left Berkeley at ten in the evening. All night we drove, passing the Yosemite Aspen Valley ranger station at six the next morning. It was yet quite early, even in this dry year, for Tioga Road travel, and the road was still moist, the roadside trees fresh. We glided among the tall fir and pine columns of the cool forest, reveling in the fragrance of it. At the pass we left nine days' food, then dropped into Mono Basin, turning south to make our next two caches at the end of the Mammoth Lakes road and at 10,500 feet on Rock Creek. At Independence, after a short stop for perishables and the provisions shipped ahead from Berkeley, we made our final turning into the Sierra, ascending the spectacular road to Onion Valley.

Here, on the following morning, the food was divided into three groups, two of which were cached. The third, with our equipment, was tied to the packboards, and late that afternoon we started up the south fork of Independence Creek — a shortcut to Center Basin. The

pace was slow and none too steady; but it was good to feel the rocks under foot and to smell the lodgepole pines once more; good to wet again our knees and noses as we drank from the streams among the cyclamen and grasses. It was good, too, to rest. At length we came to a little lake, at 10,300 feet elevation, and camped just above beside a granite apron, among lodgepole and foxtail pines. Water was close by, and kettles of it soon were heating above a pine-bough fire in a little rock fireplace. Our summer had really started.

With an eight days' supply of food we crossed the saddle between University Peak and "Peak 12,910," dropping down to a timberline camp at 11,300 feet in Center Basin. One day we devoted to acclimatizing ourselves, and climbed Center Peak, where we found no record of an ascent since the first in 1898. Another day we crossed Junction Pass into the cliffbound canyon to the south, and followed the fork of Shepherd Creek a short distance toward Shepherd Pass. There, amid the moraine masses that covered the canyon floor, we cached several days food for subsequent use. To complete the circuit of University Peak, we returned the next day to Onion Valley by Kearsarge Pass, experiencing our first bit of late spring weather. At 10:45 in the morning snow began to fall. Hervey three days previously had forecasted this storm; but he had given the starting-hour at 11:00, not 10:45, and had predicted rain, not snow. I can never forgive him these blunders.

With replenished supplies we started from Onion Valley a second time. Crossing Kearsarge Pass, we followed down Bubbs Creek to Junction Meadow, whence we went up East Creek to East Lake. Above this lake, on the west side of the floor of the canyon, is a huge granite cave, an assurance of shelter in the event of a storm. Four peaks fell to our attack during our stay, but they only fell along with much snow. Snow was falling heavily as we traversed Mount Brewer, and flurried another day on "Peak 12,610." From East Lake we had hoped to trace Clarence King's route to and from Mount Tyndall, but the snow fell so discouragingly that it was decided to look for the footsteps of Mr. King another year. So on Memorial Day we packed to Harrison Pass and passed the afternoon on Mount Stanford.

From Harrison Pass there were delightful miles of descent into the Kern basin. How pleasingly this basin contrasts with the severity of the Kings-Kern Divide—its long inclines, its broad hollows filled

with lakes and meadows, its somber distant aspect of ridges and forest, all blending in soothing tranquillity with the late afternoon diffusion of sunlight! We marched into the evening, past the beaten remains of trees that spoke of a once kindlier climate, into a last stand of lodgepoles, the highest on Tyndall Creek. Sonorously, a Hermit Thrush gave cheer to the efforts of this forest to survive. We paused to camp and give him audience, while from the broad canyon of the Kern arose a chill night breeze, and the pines responded to the throbbing roar of the creek below. Intangible in shadow the peaks appeared closer, as if they, too, were listening to the ethereal Sierran fugue.

Although much activity had been planned for our Kern sojourn, our desires were somewhat appeased by the first day's effort—a moonlight ascent of Mount Tyndall, breakfast after sunrise on Mount Williamson, lunch on Mount Barnard, a second lunch at Wales Lake, and a ten-mile walk back to camp. Next day we crossed Foresters Pass, adding en route what was apparently the first ascent of "Peak 13,826."

Hardly were we settled once more in the headwaters of Kings River when a new storm set in, and snow fell for about twenty-four hours in the next forty-eight. We camped in a light stand of lodgepole under East Vidette; but as the storm was obviously not intending to leave, we did, and after a night's camp below Bullfrog Lake, crossed Kearsarge Pass and returned to our cache at Onion Valley.

Already our trip had enlightened us to this extent: that we could leave the beaten path, and that snowstorms could be either enjoyed on their own account or rendered innocuous by song. Next we were to prove that a flashlight in the knapsack is superfluous—at least, we didn't have one. We had crossed Glen Pass and were camping in Sixty Lake Basin. We were returning from an ascent of Mount Clarence King and stood watching the brilliance of a sunset over the mists and clouds that gathered around the peak. The evening chill urged that we hasten, simultaneously inactivating our attempts to do so. But with some struggle and two rope-downs we descended a thousand feet of icy rock to the notch south of our peak before the stars had all come out. To the east lay our camp, far below chutes, granite bluffs, lakeshore meadow, and talus. A steep snow slope led down another five hundred feet. Ahead were the bluffs of a granite step, the holds becoming more obscure in the steadily in-

creasing darkness. At first we could see the route dimly; but soon we were sounding the blackness, tossing rocks into the foreground. If, after a second in the air, a rock still whistled, we were discouraged from further progress in that direction. To the north a little stream cascaded, and hoping that there would be no high falls in the course of it, we crossed over on some ledges, and followed it down successfully to a meadow. We staggered forward, one foot stepping high, the other in an unseen pocket perhaps a foot below. Occasionally we could hear a stream gurgling, and found that we could avoid stepping into it by holding to the willows and feeling for the water with our hands. Then, as we poked around what might have been any one of the sixty lakes, what a surprise it was to stumble right into camp. A fire was soon lit, but only for heat and for cooking—we didn't need the light!

From Sixty Lake Basin we marched three days, over Pinchot Pass and Mather Pass to Palisade Creek. Then, by crossing the notch between Middle Palisade and The Thumb, we were able to descend the South Fork of Big Pine Creek to Glacier Lodge and our next cache. For the first time in two weeks Hervey could look at another face.

Here, also, was our first experience with a mule on a trail. Although confirmed knapsackers, we had deemed it advisable to have our 220-pound cache moved up the North Fork trail to a camp at Fifth Lake, at an altitude of 10,900 feet. Old Jiggs, our mule, was most lovable, but he was quite unaware that we were running the trip. He was thirsty in the middle of each ford, famished at the sight of every wisp of grass, and susceptible to *wanderlust* each time we rested; but these faults were as nothing. His racial idiosyncrasy of one single forward speed on ups, downs, and levels was, however, most exasperating. On an up-hill stretch he was usually resting his head upon my packboard, pushing, and blowing sweet words in my ear. Then, as the trail dropped, my customary step-out would be suddenly curbed as I reached my rope's end, and there was definite indication that nothing I might do would change matters. By the time we reached Fifth Lake I was thoroughly subjugated to the desires of the dumb animal, and a much faster up-hill climber than I had ever desired to be.

The following evening, June 14th, quite unaffected by the report at Glacier Lodge that he had been lost, Norman Clyde arrived in

our camp, immediately dubbing it "The Palace Hotel." One look at his towering pack suggested a retaliating analogy, for surely he was bearing a "Coit Memorial" pack. We were not particularly surprised to see him, as we had intended to climb together in the Palisade Group. The real surprise came at dinner, when he not only took several dozen eggs intact from his pack, but was able to manage a second helping of a "knock 'em dead mulligan" of rice, corned beef, and chili powder, cooled with hot cocoa. We had figured that only the most hardy could manage such menus, and had forgotten that there was at least one person in the Sierra as hardy as we. After dinner we considered climbs in the region, lamenting the "snow-cluttered" condition of the north and northeast faces. One climb, it was decided, was sufficiently unhampered by the new snow—Agassiz Needle, by the east face and north arête.

Next morning we started, with Norman Clyde bearing the brunt of the work as leader. He chose the route, and cut or cleared the steps with his ice-axe, while we took a day off. The actual climbing was not difficult, but might well have been so had we digressed from the route followed. The party worked smoothly together, and it was only natural that we should reach the summit. What seemed unnatural, however, was the balmy weather when we arrived there. Where were the clouds, the singing rocks, the snow flurries? What should one do on a peak when not confronted with the urgent need for shelter? We could only pause to absorb the sun and scene and to sign the Sierra Club register.

And here, indeed, is the answer to all who question climbing with a "why do they do it?" Who, once having enjoyed it, does not long for the deep satisfactions of beholding a panorama from a vantage-point, access to which has cost something in effort and training; of knowing that here is a frontier still; of being aloof, and yet in close communion; of being awed by the great, but remaining proud of the success of the organized effort of the small? Consider, also, the intellectual pleasures of geological or biological inquiry; the diabolical sport of rolling rocks down upon no one (one hopes) below; the reminiscence of topographical acquaintance; the esthetic enjoyment of the pictures of harsh cliffs, towering clouds and graceful trees, and the softest mottling of color and light and shadow.

It took two more climbs to convince us that our efforts were best saved until the snow was off the shelves. One of these was the

traverse of Mount Sill, from the great notch of North Palisade over into the South Fork of Big Pine Creek, whence camp was reached by the notch between Mount Sill and "Peak 13,500." The second climb was a traverse of Temple Crag, up two chutes on the north face, and down by the Buck Mountain (Peak 12,840) saddle. On neither of these climbs did a drop of rain fall. We were treated only to thunder, lightning, mist, hail, and snow. The storm on Temple Crag, the third storm in four days at Fifth Lake, instigated a move to lower country. We didn't mind the storms, for they were confined to daytime; but the snow melted very slowly on the 14,000-foot peaks.

Three days of marching, loafing, and fishing brought us to a base camp for Devils Crags, at 10,000 feet, on the south fork of Rambaud Creek. One afternoon was devoted to reconnaissance from Rambaud Peak, where Hervey made a diagram of the chutes and notches of the Crags, which became most useful. For the next three days there followed our most interesting mountaineering. We climbed ten of the low Crags and explored nine of the chutes. We climbed both roped and ropeless, and roped down in severe places. Norman spent long periods with his ice-axe, cutting steps for the party. We basked in the sun and chilled in the wind. Hervey built enormous cairns, and we left little registers. Each night we returned to one of our happiest camps—on a meadow-shelf, shaded by hemlocks and pines, with colorful cliffs, and graced by a lakelet, flower-bordered with cassiope-bells and cyclamen.

When, at last, we had climbed all previously unclimbed Devils Crags, we moved camp to Dusy Basin. The peaks were now yellow in smoke-filtered sunlight, for a forest fire was burning in some lower region. We could barely distinguish the peaks of the Black Divide across Le Conte Canyon. The next afternoon we returned to the "Palace Hotel," where mail was waiting for us. Welcome in mine was a package from George Rockwood—a birthday present of a carton of candy bars. He well remembered what had, the previous summer, been an easily absorbed addition to supposedly well balanced rations.

June 29th was to be our last day of climbing in the Palisade region, and we proposed to make a full day of it. We were unable to get away from camp before eight, but this was our usual procedure, far more comfortable than three-in-the-morning lantern-light starts. We enjoyed the sunny walk up the trail and over the Palisade Gla-

cier; and settled down to climbing in the chute leading to the notch between North Palisade and Thunderbolt Peak. Ropeless climbing took us to the summit block of Thunderbolt, a belayed shoulder stand to the top. Then, turning back, we kept to the ridge, traversing the two peaks of the North Palisade, and continued southeast into the great notch. The sun set as we returned to the glacier and the amber summer alpenglow tinged the peaks about us. We were thankful not to be in camp, fussing over kettles and camp-fires; and regretted that there were so many below who chose not to see sunsets from high places, among them many mountaineers. Secretly, I wondered if on many a morning, while I was struggling to keep the tang *in* the air and *out* of the sleeping-bag, someone, thousands of feet above, was not regretting that I was choosing not to witness *sunrises* from high places. If he were, I wish he wouldn't.

It was time to bid Norman Clyde goodby, for a while, at least. In his company we had learned much of safety and precaution, and of the use of the ice-axe, both for mountaineering and for domestic purposes. We had gathered bits of geological and botanical nomenclature, and we had heard stories and anecdotes about the Sierra, and about those who love it and those who live too close to appreciate its attributes. Moreover, we had become acquainted with Clyde's technique of establishing "boulevards" up the precipitous sides of peaks, particularly in the Palisade group. But on July 1st our schedule called for northerly progress, so once again we crossed our Jigsaw Pass (a mile north of Agassiz Needle) to Bishop Pass and Dusy Basin.

On July 2d we reached Muir Shelter, carrying seven days' supply of food, regular equipment, and quite a supply of firewood, planning to stop at the hut two nights, and wishing to leave untouched such wood as might be there. As we closed the door behind us a long-threatening thunderstorm broke loose in earnest. The wind became a gale, and the hail rattled against the little window, but the walls were of stone, over a foot thick, and quite unyielding. We lit a fire, cooked supper over the fireplace grate, and the room warmed with the smoke that was buffeted down the chimney. When the storm had subsided we stepped out into the fresh wind to absorb colorful bits of a most glorious sunset. Tremendous towering banks of nimbus opened up and shone pure white or breathed their last foreboding in gray-blacks, until the sun sank behind some unnamed peak with a

blaze of sunset gaudiness, presently to subside into a peaceful delicacy of color—a spectacle perhaps to be equaled or surpassed, but never duplicated.

From the hut we made a one-day trip into the mismapped basin of Goddard and Disappearing creeks. From Scylla and Charybdis much cartographic error was obvious, several lakes being omitted. One lake in particular captured our attention. On the map it appeared to drain into Goddard Creek. Actually the only drainage was into Disappearing Creek, by *two* outlets. This comment is made for the purpose of correction and not in disparagement of the remarkable topographic work done more than twenty-five years ago by George R. Davis, of the U. S. Geological Survey. In many respects his Mount Goddard quadrangle is one of the finest maps ever made of rough country.

Another day took us through the snowless Evolution Basin to a camp at 11,100 feet on the Darwin form of Evolution Creek, from which, as a base, we traversed Mount Darwin from north to west. In two more marches we crossed Glacier Divide into Humphreys Basin, the Pilot Knob ridge into French Canyon, Pine Creek Pass, and another pass (for knapsackers only) from Pine Lake directly into Morgan Creek, where we followed an old tractor road to our cache on Rock Creek, in Little Lakes Valley. Norman Clyde arrived the same afternoon from Glacier Lodge, and made camp ahead of us.

While not engaged in guarding our provisions against the deprivations of Belding ground-squirrels we explored the neighboring peaks—Bear Creek Spire, by the east face and north arête, Abbot, from the glacier, and Mount Dade. Then we moved into Pioneer Basin with its supposedly unclimbed peaks—Huntington, Morgan, Hopkins, and Crocker. We were not very much surprised to find on the southerly peak of Mount Huntington the record of a previous ascent, but were astonished at the discovery that the climber was a Basque—perhaps the only sheepherder who ever climbed a peak and left a notation of his act of indiscretion. But, other than the benchmark on Mount Stanford, no additional record was found that day in a search of the ridge as far north as Mount Morgan. It was sunset as Norman and I—Hervey was left favoring an ankle on Stanford—reached Mount Morgan. We traversed Stanford again at 9:00 P.M. and made our way by starlight down the southwest side, frustrating Hervey's rescue plans by reaching camp shortly after midnight.

The ascent of Hopkins and Crocker ended our Pioneer Basin days. Hervey and I undertook an involved departure from the trail, crossing the northeast shoulder of Mount Crocker and descending a chute into McGee Creek—one of the best knapsack climbs in the Sierra. Our next passes—the first, west of "Peak 12,309," the second, north of "Peak 12,292"—were much easier, and connected with the Duck Lake trail to our Mammoth Lakes cache. Steady travel took us over Mammoth, Agnew, and Donohue passes to Tuolumne Meadows; then north with the second two weeks of the Sierra Club Outing party into Matterhorn Canyon. Very exclusively, we camped two miles above the commissary.

By starting early in the morning of July 24th we were able to get on and off the Doodad before the trampling multitudes arrived, but we were less fortunate on the West Tooth, where ours was the third ascent of the day. These peaks, about as difficult as any we had climbed, were the only ones of the sixty-two climbed since May 21st on which we had been preceded this year.

At camp-fire that night it was decided that something must be done. Our earliest plans had called for an ascent of Matterhorn Peak, and now we were faced with the problem of finding space at the top. Then we recalled having read at Mammoth Lakes of a lunar eclipse scheduled to start at two the next morning. Our *chef d'œuvre* would be the first ascent of Matterhorn Peak by the light of a partially eclipsed moon.

The starting hour, midnight, arrived after we had slept but three hours. While trying to convince myself that I was doing the right thing on the correct night, Hervey was out and ready to go. I even retained my incredulity until the eclipse started. We stumbled very little, for the eclipse was not total, and long before it reached its height the eastern sky had brightened. While we were yet a few feet below the summit the sun rose, and we witnessed the phenomenon of seeing the sun cast, simultaneously, our shadows and the shadow of the earth.

As we were finishing breakfast back in camp, a Sierra Club party led by Norman Clyde filed by. When we mentioned our climb, it transpired that none of those in the party, nor, indeed, any of the hundred or more Sierra Club members in camp, had known of the eclipse. A little later in the morning the newlywed Mr. and Mrs. Leonard passed our camp on the way to their headquarters on Black-

smith Creek. It had been over two months since we had seen them, and there was much to discuss. Inevitably, we reached the subject of the eclipse. Leonard ventured, "It must have been especially beautiful, with the moon full!" We all laughed as we remembered our elementary astronomy. What a sight an eclipsed *new* moon would be!

Months before, while deep in the plans for this summer of Sierra knapsacking, we had asked ourselves how long we might climb before the sport would pall on us. We came close to the answer in the Sawtooth region. We had just climbed the West Tooth. The entire ridge presented excellent climbing, particularly the traverse of the Three Teeth. But there on the West Tooth, with the Middle Tooth almost within touching distance, our interest subsided. Although it was still early in the afternoon, we roped-down from the ridge and returned to camp.

Was ten weeks, then, the limit? Could the Sierra offer only a transitory enjoyment, merely a temporary escape? Had the rudimentary life toppled from its exalted pedestal in our lives?

The final answer must be an individual one. After Hervey Voge and I had returned to Tuolumne Meadows, and had parted to go to our respective homes, as I rode down, down, and out into the hot valley, my individual answer took form with pangs of regret. By the time I reached Berkeley the answer was certain:

This person was not coming home—he had just left it!

THE MIDDLE FORK OF BISHOP CREEK

By ANGUS E. TAYLOR

AST of the Evolution Basin, nestled under the precipices of the Main Crest, is the upper basin of the Middle Fork of Bishop Creek. It is a trail-less domain, hedged in on three sides by imposing cliffs and castellated ridges. Apparently, it has been seldom visited, and, so far as I know, nothing has ever been written about it. Yet it deserves more attention. For although an increase in travel will destroy some of its charm and aloofness, the region is of a beauty and grandeur indestructible, and the lover of wilderness will delight in making its acquaintance.

My own discovery of this portion of the Sierra came about in August, 1934, when Merton Brown and I spent two weeks in the Bishop Creek area. After some scrambles around Mount Emerson and a visit to Humphreys Basin, bad weather kept us near our North Lake camp for three days, but with clearing skies, on August 28, we packed knapsacks and bed-rolls for a four-day excursion into the Middle Fork.

There is a rough trail along the western shore of Lake Sabrina, ending just under the great cliffs where the stream comes cascading down from the upper basin. It was hard work finding a way up these cliffs with our heavy packs, but by early afternoon we found ourselves following the stream up a gradually sloping floor of glaciated granite. The prevailing fissures in the rock here are parallel to the direction of the drainage, so that instead of the usual step-tread type of erosion, there are channels and grooves, worn smooth by ice. We found a suitable camping place at about 10,700 feet. The spot was ideal. We had abundant wood from dead lodgepole and *albicaulis* pines; a great ledge of granite served as wind-break and reflector of our roaring, cheery fires; and a few feet away the stream swept in a broad, sandy-bottomed arc, an irresistible temptation to swim. The remainder of the day was devoted to making a comfortable spot for our three-night encampment, and responding to the lure of the limpid waters. During the next two days (August 29-30) we explored up the stream and along the main crest from Mount Darwin to Mount Powell. We found many

things of interest, not the least of which was that the Mount Goddard quadrangle of the U. S. G. S. map contains certain errors in the representation of the lakes and streams.

The region is one of exceeding grandeur and beauty. The granite has responded to glaciation with a rich variety of forms, which, combined with the lakes and streams, make a superb approach to the northeast front of the Evolution Group. Mount Darwin presents a triply-fluted, sheer face, while Mount Haeckel, with its névé and lake, has a truly alpine appearance. The latter is a Gothic peak of noble cast. We were astonished at the amount of snow remaining under the main crest. Even with a mild winter preceding, there were still great snowfields on the sheltered northern exposures. From a distance many of these frozen expanses have the appearance of glaciers. The one on Haeckel, although not shown as a glacier on the map, has a small moraine-like accumulation at its foot, and seems also to have a bregschlund. The sharp arête extending eastward from Mount Haeckel has a continuous bank of ice and snow at its base. This ridge, and the glaciated canyon of which it is a wall, terminate in a cliff of Yosemite-like verticality and markings, at the foot of which is a large lake. These features constitute one of the major scenic attractions.

One of our desires was to discover, if possible, a feasible pass over the main crest into the Evolution Basin, or into the upper end of Le Conte Canyon, to join the John Muir Trail near Muir Pass. We had been in the broad amphitheater east of Mount Darwin, and crossed a high, frozen col into the basin north of Mount Haeckel. The main crest is readily attainable immediately south of peak 13,332, north of the Mount Spencer spur. There is about five hundred feet of rough work, probably impossible with animals, and the crossing is near 13,000 feet. So far as a *trail* route is concerned, the obstacles are significantly great, especially in conjunction with those lower down. For the descent from this recess, scenic though it is, is very rough.

Our search for a pass was again thwarted on the following day, when we climbed to the main crest between Mount Wallace and Mount Powell. We started out as usual, without definite intentions on a particular peak. However, the summit which focussed our attention was a sharp arête culminating in a tower, and having a large snowfield on its steep northern face. We took this to be Mount

Powell, but subsequent consideration would indicate that it is one of the Clyde Spires, first climbed in 1933.¹

We reached the lake at the extreme head of the stream, and found it to be fed from the snowfield mentioned in the preceding paragraph, and in addition, from a snowfield occupying the deep embayment in the main crest at the point where we had hoped to effect a crossing. We were not equipped for climbing on snow and ice, and the cliffs which hemmed in the lake were such that the easiest way to attain the main crest was to climb the mountain.

From the lake we worked up the cliff by easy ledges into the debris-strewn area at the foot of the snowfield. Choosing to skirt this on the west, we worked carefully along above the brink of small precipices, finally coming out on the rounded shoulder of the mountain, above the embayment. The view opened up grandly to the north and west, with Darwin dominating the horizon. Soon we glimpsed Goddard, and then headed straight up a shallow chimney to the summit ridge. Once up, the magnificent panorama of the Kings River basin burst upon us, and Le Conte Canyon yawned darkly below.

We had lunch here, then faced the final problem of traversing the arête to the tower at its eastern end. It became more and more a knife-edge, and just short of the tower we found a notch, the crossing of which without a rope seemed beyond our powers. The peak of our aspirations was a scant thirty or forty feet above us, yet we did not reach it. For the clouds were lowering, and a light snow set in, driving all thought of continuing the assault from our minds. We might have found a way around the notch, and certainly with a rope it would have been easy; but it seemed wiser and pleasanter to leave the mountain top to the snow and hail. So we left our names in a sardine can at our highest point (estimated at 13,300 feet), then hurried down the way we had come.

The storm, with violent display of thunder and lightning, lasted several hours. Later, as we dried our clothes by a cheering fire, the clouds thinned, revealing a light, pure coat of glistening white on the old snowfields, and many whitened gullies on the peaks.

¹S. C. B., 1934, xix:3, p. 94.

THE STORY OF MOUNT WHITNEY

BY FRANCIS P. FARQUHAR

PART II

IN a former number of the *Sierra Club Bulletin*¹ the first chapter of the story of Mount Whitney was told: how the mountain was discovered and named by the State Geological Survey in 1864; how Clarence King tried to climb it; how, through King's mistake, the true location of the mountain became obscured; how the mistake was discovered; how the peak was finally climbed on August 18, 1873, by Lucas, Begole, and Johnson; how controversy raged over claims to priority; and how attempts were made to abolish the name "Mount Whitney" in favor of "Fisherman's Peak" or "The Dome of Inyo."

By the end of September, 1873, the record of ascents stood as follows:

1. August 18: John Lucas, Charles D. Begole, Albert H. Johnson—"The Fishermen." (Generally accepted as the first ascent.)
2. Date uncertain: William Crapo, Abe Leyda. (Crapo claimed a first ascent with Leyda on August 15, but the argument is unconvincing. It seems likely that the date of their ascent was after August 20.)
3. September 6: William L. Hunter, Carl Rabe, William Crapo, Tom McDonough. (Hutchings notes that on the back of the record the men's ages are given: Hunter—31, Rabe—39, Crapo—31, McDonough—54.)
4. September 19: Clarence King and Frank Knowles.

All these ascents were made from the west or southwest, by much the same route as that usually taken at the present time from Crabtree Meadow. Rabe's description of the climb of September 6, 1873, is easily recognized as applicable to this route:²

It was not yet apparent how we were to climb the colossal peak ahead. But, following my companions in silence and keeping a sharp lookout ahead, I at last spied a crevice

¹S. C. B., 1929, xiv:1, pp. 39-52.

²San Francisco Daily Evening Bulletin, Saturday, September 27, 1873, Supplement.

going up among the crags which seemed to offer a way, and towards which I made my way. This crevice appeared to be about 10 feet wide, with a slope of some 45 degrees. Keeping to the larger boulders, I slowly worked my way through it. All around me, in wild confusion, lay the wrecks of avalanches. Taking a rest, I saw Mr. Crapo far ahead, and Mr. Hunter making with full speed for the summit. There are some six or eight of these crevices to be passed in succession, and this is undoubtedly the hardest portion of the ascent. It is best to keep to the larger boulders on account both of ease and safety. For one is liable to dislodge the smaller ones, and the slope is so steep that when one is started it is liable to carry others in its train.

I found the ascent, though not particularly dangerous, extremely laborious and slow. The light atmosphere at the height of over 13,000 feet was beginning to tell upon my lungs, and I had to stop every fifteen or twenty minutes to rest and breathe. But after an hour and a half of very hard climbing, we stood at last on the crest of Mount Whitney, and I hung my barometer on the monument which had been erected by our predecessors a few days before.

This is the first circumstantial account of an ascent of Mount Whitney, and Rabe is also the first to give a distinct picture of the appearance of the summit:

The summit of the peak has an area of about one and a half acres of flat surface, having its highest point at the eastern edge and sloping gently towards the west. This area was free from snow at the time of our visit, though there was plenty of snow in the cañons below around the northern sides of the mountain.

The view from here is grand indeed, and embraces many a peak at a distance of 150 miles or more. To the southeast the San Bernardino range was distinctly seen. Scattered here and there in the bottoms of the granite basins and amphitheaters which surround the base of the mountain are some dozen or more little lakes filled with water of most crystalline transparency and beauty.

Creeping out to the eastern edge and taking one last look over the lip of the terrible precipice, which fell from beneath us with almost vertical walls for thousands of feet below, and whose dizzy grandeur makes me shudder yet, we slowly turned and bade farewell to this sublime and unquestioned Monarch of the Sierras.

A new chapter opens with the visit of John Muir in October of the same year, only briefly referred to in the former article. At that time Muir was thirty-five years old and was at the height of his extraordinary ability to travel rapidly and unencumbered through the unexplored wilderness of the High Sierra. He had set out from Yosemite, in September, with Dr. Albert Kellogg, the botanist, and William Sims, an artist, for a trip to Kings River Canyon and beyond. Galen Clark accompanied them for the first two weeks. On October 13th the party crossed Kearsarge Pass and descended to Owens Valley. In his published writings Muir does not give a clear account of what followed, and it is necessary to piece the story together from several sources. A brief reference is found in a contemporary letter, in which he says:³

After crossing the range by the Kearsarge Pass, I again left the Doctor and Billy and pushed southward along the range and northward and up Cottonwood Creek to Mount Whitney; then over to the Kern Cañon again and up to the new "highest" peak which I did not ascend, as there was no one to attend my horse.

In a letter to George W. Stewart, written years later, he says:⁴

Early in the morning of the 25th I left my horse on a meadow a short distance north of the Hockett trail crossing of the summit, and climbed the mountain (now Sheep Mountain), about 14,000 feet high, named Mt. Whitney on the State Geological Survey map of the region. To the north about eight miles I saw a higher peak and set off to climb it the same day. I reached the summit needles about 11 o'clock that night, and danced most of the time until morning as the night was bitterly cold and I was in my shirt-sleeves. The stars and the dawn and the sunrise were glorious, but, having had no supper, I was hungry and hastened back to camp, and to Independence, where I left my horse, and set out again for the summit a-foot, direct from the east side, going up a cañon opposite Lone Pine. I reached the summit about 8 o'clock A.M., October 29, 1873.

These dates, presumably quoted from memory, are incorrect, for Muir's own pocket diary, access to which has been furnished through the kindness of Dr. Badè, shows that the party descended Kearsarge Pass on October 13th, and that Muir climbed "False Mt.

³ The Life and Letters of John Muir. By William Frederic Badè. 1923-24. Vol. I, p. 393.

⁴ Mount Whitney Club Journal, 1903, 1:2, p. 81.

Whitney" on October 15th. He reached the base of the highest peak, near sunset, at the edge of a small lake. As there was no wood for a fire he decided to spend the night climbing. He was among the summit needles (perhaps in the neighborhood of Mount Muir) by midnight or eleven o'clock and had to dance all night to keep from freezing. Next morning, October 16th, he was feeble and starving and had to turn back without gaining the top. On October 17th he returned to Independence. After a day's rest, Muir set out on foot, October 19th, by a direct course for the summit, up the east side. He camped in the sage at a small spring the first night, and on the following day pushed up the canyon which leads past the north shoulder of the mountain and camped at timber line. On October 21st, at 8 o'clock in the morning, he reached the summit. That night he reached the foot of the range, and on the 22d was back at Independence.

Although Muir, himself, did not write a full account of these experiences, he apparently told them to someone, for the following winter there appeared an article entitled: "ASCENT OF MT. WHITNEY BY NIGHT. THE MOUNTAIN ASCENDED FROM THE EAST FOR THE FIRST TIME—A GEOLOGIST'S EXPEDITION AFOOT IN THE HIGH SIERRA."⁵ This article describes the trip from Yosemite and gives a vivid account of Muir's struggles with wind and cold during his first effort to reach the peak. The successful attempt is described as follows:

From Independence [. . . .] he set out afoot to again ascend Mount Whitney, this time from the eastern slopes of the Sierra, a task which is pronounced impossible in the Geological Survey. Three hours after leaving Independence a mountaineer met him and assured him he was undertaking a hopeless task; that to ascend Mount Whitney from that side was impossible. When Muir showed that he was determined to persevere in trying, the man treated him as a crazed enthusiast, who would probably lose his life in the foolish attempt. He persevered, however, and the second day out scaled the new Mount Whitney from the east, being thus the first person who has ever done so from that side. [. . . .] Muir returned the way he came.

Let it not be supposed that in making this ascent Muir climbed

⁵ San Francisco Daily Evening Bulletin, February 20, 1874.

directly up the east face. That route was reserved for another generation, employing methods and enjoying a knowledge of climbing technique unheard of in Muir's day. There is no doubt, however, as to his general route, for he describes it in an ascent of another climb made two years later.⁶ It is quite clear that he went up the North Fork of Lone Pine Creek and reached the summit from the ridge immediately north of the main peak, a route that has been followed on several occasions in recent years.⁷ It is this route to which Muir refers again in an article written a long time afterwards:⁸ "But for climbers there is a cañon which comes down from the north shoulder of the Whitney peak. Well-seasoned limbs will enjoy the climb of 9000 feet required by this direct route. But soft, succulent people should go the mule way." Should someone of the present generation of mountain-climbers feel inclined to make light of Muir's exploit, let him endeavor to duplicate it, starting from Independence—not Lone Pine—on foot, with or without sleeping-bag and the present-day advantages of concentrated foods.

No record has been reported of a climb of Mount Whitney in the year 1874. The next ascent appears to have been on July 7, 1875, when William Crapo revisited the summit accompanied by J. T. Belshaw and W. R. Johnson. Their names are included in copies of the record made by subsequent parties.

In July, 1875, John Muir returned to the mountain. After visiting Kings River Canyon, from which he made a side-trip for his first view of Tehipite, he ascended Bubbs Creek and crossed Kearsarge Pass to Independence.⁹ From Owens Valley, he led his companions, George B. Bailey and Charles E. Washburn, by his former route up Lone Pine Creek to the head of the North Fork. This time, instead of ascending to the summit directly from the ridge at the north, Muir led his party "around the north base of the mountain to the westward."¹⁰ They "passed along the rocky shores of a lake," then "gradually climbed higher, mounting in a spiral around the northwest shoulder of the mountain, crossing many a strong projecting buttress and fluting hollow, then bearing to the left urged [their] way directly to the summit." The arrival

⁶ *San Francisco Daily Evening Bulletin*, August 24, 1875.

⁷ *American Alpine Journal*, 1931, I:3, pp. 415-417; S. C. B., 1932, xvii:1, p. 55.

⁸ *Century Magazine*, November 1891, p. 95.

⁹ *Picturesque California*. Edited by John Muir. 1888. Vol. I, pp. 84-87.

¹⁰ *San Francisco Daily Evening Bulletin*, August 24, 1875.

was "duly announced by Bailey as soon as he was rested into a whooping condition. [. . .] Undemonstrative Washburn examined the records of antecedent visitors, then remarked with becoming satisfaction: 'I'm the first and only student visitor to this highest land in North America.' " Muir does not describe the descent, except to say: "We left the summit about noon and swooped to the torrid plains before sundown, as if dropping out of the sky." The Owens Valley newspaper mentions the climb, giving the date as July 23d.¹¹ The Wheeler Survey party and Hutchings, in their copies of the record, give it as July 22d. Hutchings copied the following note: "Chas. E. Washburn, formerly a member of Cornell University, Ithaca, N. Y., Class of '75, at present a member of the Univ. of Cal. Class of '76—a native of Fredonia, N. Y.—age today, 21 years. The first high peak ever climbed by him." It might also be noted that this seems to be the first of a long series of college class-numerals and fraternity letters engrossed upon the summit.

Very little has heretofore appeared in print about the visit of J. M. Hutchings and his party. The *Inyo Independent*, that all too brief chronicle of the time, mentions their departure for the mountain and gives an account of their climb:¹² "They were accompanied by Al. Johnson, who was one of the first party that ever made a mark on that lofty elevation. Under his guidance the party got to the top without trouble or delay, and succeeded in obtaining some sixteen first-rate photographic views." Fortunately, Hutchings' manuscript journal has been preserved, and with it some of the photographs taken by Professor James, two of which are here-with reproduced. "Prof. James," writes Hutchings, "is the first photographer, we presume, that ever stood upon this, the highest point in the U. S., and took views therefrom." The date of the ascent was October 3, 1875. The party comprised: J. M. Hutchings, Yosemite; Albert Kellogg, M. D., botanist, San Francisco; Professor W. E. James, photographer, New York; Dr. C. B. White, U. S. A., doctor at Camp Independence; A. H. Johnson, guide, Lone Pine; Edmund Bedford, muleteer, Yosemite; George P. Stanley, Long Valley; John F. Connell and James Fleming, soldiers from Camp Independence. The ascent was made by way of Cottonwood Lakes to Whitney Meadows, Rock Creek, and Crabtree

¹¹ *Inyo Independent*, July 24, 1875.

¹² *Inyo Independent*, October 9, 1875.

Meadow [the present name]. Hutchings does not describe in the journal his subsequent experiences: the reason may be inferred from the *Inyo Independent's* account:

Completing their work there, Mr. Hutchings proposed to take a short cut across the country (if such gigantic, awe-inspiring mountains of rock can be called a country), with a view of intersecting the Kearsarge trail, and a possible ascent of Mount Williamson. Two others of the party volunteered to accompany him. Taking a small supply of "grub," but no blankets, the three started afoot, the main party taking the back track, and arriving here at noon the third day following. [.....] By the time [Capt. Magowan's rescue party] had fairly reached the mountains the missing ones came tramping in, weary, footsore, and, oh, how hungry! [.....] Instead of a practical route for even expert footmen, they found sheer precipices thousands of feet high cutting square across the proposed line of travel, so that it was simply impossible to proceed in the desired direction. Descending on the second day to what appeared to be a very low pass just to the west of Mount Williamson, they found they were yet over 12,000 feet high, the mountains around appearing to tower as high above them as from this valley. By this time the party were looking for a way to reach the foot, not the top of the mountains. Fortunately they succeeded in getting into and climbing down the long canyon along the north side of Mount Williamson, reaching here on the evening of the third day.

During this same year, 1875, the Wheeler Survey sent two parties to the summit of Mount Whitney. The first, comprising William A. Cowles (topographer), Frank Holland, Hampton Hutton, Joe Devel, made the ascent September 24th; the second, Lieutenant Rogers Birnie, Jr., Louis Nell (topographer), F. Brockdorff, October 13th. The Wheeler Survey was very loosely organized and its publications reflect the lack of systematic method that was characteristic of its work. Wheeler persisted in calling the mountain "Fisherman's Peak," with grudging references to the name "Mount Whitney." In his "Geographical Report," published, after long delay, in 1889, are some brief notes accompanying a lithographic view made from a sketch by Cowles.¹³ The altitude was found to

¹³ Report upon United States Geographical Surveys West of the One Hundred Meridian, in charge of Capt. Geo. M. Wheeler, Corps of Engineers, U. S. Army. Vol. I. Geographical Report. Washington, 1889, pp. 97-101, plate xv.

be 14,470 feet, "by angles of elevation from Old Camp Independence and Lone Pine and corresponding angles of depression from the peak."

It seems quite certain that until 1878 no woman had climbed Mount Whitney. In that year, however, a group of men and women from Porterville, Tulare County, made an expedition to the mountain. The party consisted of Mr. and Mrs. R. C. Redd, Miss Hope Broughton, Miss Mary Martin, Miss Anna Mills, N. B. Martin, Luther Anderson, Kit Carson Johnson, Henry Ford, George Redd, and Robert Redd.¹⁴ Years later, Mrs. Anna Mills Johnston, wrote her recollections of the trip.¹⁵ The party entered the mountains by way of Dillon's Mill, crossed the Little Kern, and struck the Hockett Trail. Near the soda spring, where now is the Kern Canyon ranger station (Camp Lewis), they found "over thirty people from various parts of Inyo County—as jolly a crowd as one would wish to meet." Here they were joined by William Crapo, of Cerro Gordo, one of the pioneers of 1873, who offered to guide them to Mount Whitney. Their route followed the Hockett Trail to the cinder cones of Golden Trout Creek, thence, via Whitney Meadows, to Rock Creek, and across a ridge to the lakes at the foot of Mount Whitney. Mrs. Johnston's account of her experiences on the eve of the climb and upon the summit deserves more than a mere mention:

Just before reaching camp my horse took a notion to jump over a small stream, very unexpectedly to me, and my back was so severely injured that I could hardly step without experiencing severe pain. Having been lame from early childhood, everybody said it would be utterly impossible for me to climb to the summit of Mt. Whitney. But I was not easily discouraged, and had always held to the idea that I could do what other people could—my surplus of determination making up for what I lacked in the power of locomotion. But now at the eleventh hour, [...] like Moses, I had gotten where I could see the promised land, but the chances for getting there were few indeed. [...] In that hour of anguish I remembered my sins, and carefully walking to an obscure place, away up there so near heaven, where none but God could hear, I knelt, facing the great mountain, and prayed—prayed as I had not for years; prayed with the spirit and the understanding also. When I had finished, the mountain-top

¹⁴ *Mount Whitney Club Journal*, Visalia, 1903, I:2, pp. 81-82.

¹⁵ *Ibid.*, 1902, I:1, pp. 18-28.

seemed closer, and I returned to camp with a much lighter heart.

On the following day, August 3, 1878, the pain nearly gone, she started on alone ahead of the party in order to rest before the steep portion of the climb. All seem to have reached the summit without any remarkable incident. Mrs. Johnston continues:

The supreme joy I felt when I realized that my prayer had been answered, and that I was at last really standing on the summit of Mt. Whitney, knew no bounds. For the time being I forgot that I ever was tired; one glance was enough to compensate for all the trials of the trip.

The return was made "over an unknown route, rough in the extreme, towards the head-waters of Kern River. . . . After trying several routes, and being compelled each time to turn back on account of precipitous bluffs and impassable streams, [they] at last found a pass and descended to the river."

The year 1881 was important in the annals of Mount Whitney, for it saw the first of a series of expeditions sent to the summit for scientific observations. Professor Samuel Pierpont Langley, at that time Director of the Allegheny Observatory, near Pittsburgh, Pennsylvania, later Secretary of the Smithsonian Institution and pioneer in airplane development, selected Mount Whitney, largely upon the recommendation of Clarence King, as the site for conducting observations to determine the amount and quality of the heat sent to the earth by the sun. His report, which is mainly devoted to the discussion of his experiments, contains a chapter on the "Journey



OUTLINE OF MOUNT WHITNEY RANGE, AS SEEN FROM LONE PINE

[From Langley's "Researches on Solar Heat," 1884]

to Mount Whitney, 1881," an outline drawing of the peak as seen from Lone Pine, a lithograph view of his high mountain camp, and a map of the "Vicinity of Mount Whitney, California, with plan of

proposed military reservation."¹⁶ Besides Professor Langley, the members of the party were: James Edward Keeler and William Cathcart Day, young scientists recently graduated from Johns Hopkins University;¹⁷ Otho Ernest Michaelis, captain, Ordnance Department, U. S. Army; George F. Davidson, of San Francisco, a volunteer observer; Sergeants Dobbins and Nanry, of the Signal Service; Corporal Lanouette and five men from the Eighth Infantry; Mr. Frost, a carpenter; and the well-known Messrs. Crapo and Johnson, as guides.

Unforeseen obstacles and unfamiliar conditions delayed the establishment of the high mountain camp at the southwestern base of the peak until mid-August, and it was not until the first week of September that observations of instruments were made on the summit of the mountain. Captain Michaelis and Sergeant Nanry climbed the peak on August 14th, and Professor Langley visited the summit on August 22d and September 5th. Ascents were made on other days for the purpose of carrying up supplies and improving the trail. "On the 2d of September," writes Langley, "Captain Michaelis went up the mountain, with Sergeant Nanry, and Coles and Johnson as guides, carrying a tent and intending to stay three days for observations. Early the next morning, all the party made their appearance in camp, reporting that they had passed a sleepless night, without shelter or warmth, the wind being so high that they could not pitch the tent, while the quarter-cord of wood, carried up with great difficulty, had been all burned in a vain effort to keep warm." Keeler and Johnson spent the night of the 4th on the summit and secured valuable observations.

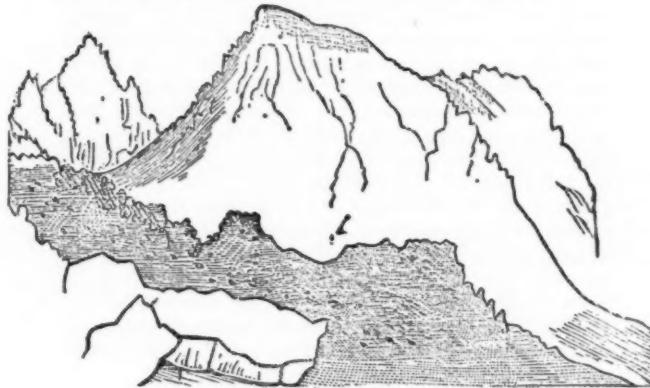
Langley does not mention another nocturnal party that seems to have occurred on the 5th, but it is described by Judge William B. Wallace, of Visalia, who with the Rev. Frederick H. Wales and Captain James William Abert Wright, met the Langley party on that date. Captain Michaelis invited them to spend the night on the summit with him. William Crapo was of the party, and A. H.

¹⁶ Researches on Solar Heat and its Absorption by the Earth's Atmosphere. A Report of the Mount Whitney Expedition. By S. P. Langley, *Professional Papers of the Signal Service*, No. XV, War Department, Washington, 1884. 242 pages, of which, pp. 35-44 constitute the narrative. (A popular article, "Sunlight Mysteries," by William C. Wyckhoff, based on the material of this report, appeared in *Harper's New Monthly Magazine*, June, 1883.)

¹⁷ Keeler later succeeded Langley as Director of the Allegheny Observatory and from 1898 until his death, in 1900, was Director of the Lick Observatory, Mount Hamilton. Day became professor of chemistry at Swarthmore College.

Johnson joined them the following morning.¹⁸ Wright says, presumably referring to Langley's expedition—the context is not clear—that "Some of his pack animals were the first that ever reached the summit of Whitney, and considerable work had to be done on a trail before the feat could be accomplished."¹⁹ In another paragraph, referring definitely to the Langley expedition, he says:

A trail was made, which was, perhaps, three or four miles in length from camp to camp, by which the pack mules, by dint of hard climbing, carried to the summit the tent, bedding and a few instruments, with enough food and fuel—a quarter of a cord of wood—to last during the four days and nights that part of the corps made observations there, September 2d to 6th. So, as far as packing up supplies is concerned, that can be done, but not without the severest and prolonged exertion of man and beast.



MOUNT WHITNEY FROM MOUNT YOUNG

A sketch by the Rev. F. H. Wales, September 7, 1881

[From "A Guide to the Grand and Sublime Scenery of the Sierra Nevada."]

With several of his instruments injured or defective, and with the atmosphere becoming murky from forest-fires, Professor Langley

¹⁸ "A Night on Mt. Whitney," by W. B. Wallace, in *Mt. Whitney Club Journal*, Visalia, 1902, I:1, pp. 1-12.

¹⁹ A Guide to the Grand and Sublime Scenery of the Sierra Nevada in the Region about Mount Whitney. Prepared and Published by W. W. Elliot & Co., San Francisco, 1883, pp. 42-43. (Much of the information is known to have come from Wright.) This pamphlet contains a lithographed view similar to the one in Langley's report, showing the camp at the base of Mount Whitney. It is described as made from a sketch by Wales, but in my copy there is a pencil note: "This has been altered quite a little from my original sketch—Wales." One wonders whether Moran's sketch, reproduced by Langley, was not treated in a similar way; certainly Moran did not make his sketch on the spot and must have copied one made by someone else. (See Plate xvii, in this number of S. C. B.)

concluded that he must remain content with the work already done, and, on the 9th and 10th of September, packed up and prepared to leave the mountain camp.

Upon Sunday, Captain Michaelis, Mr. Keeler, Mr. Day, and myself, with Johnson as guide, started early in the morning on foot, to reach Lone Pine by the direct descent down Lone Pine Cañon—an almost unknown route. This day will always live in my memory, though I cannot describe the grandeur of the scenery nor its extraordinary character, here. Much of the route, we found, could only be followed by frequent actual climbing downward. We first ascended for over two hours, past snow-cliffs and along the frozen lakes in the northern shadow of Whitney Peak, and then passing through a defile in the rocks, so narrow that only one person could traverse it at a time, we suddenly found ourselves on the other side of the ridge, which had hidden the eastern view from us for weeks—so suddenly that we were startled as we looked down as through a window from our wintry height, to the desert, and the bright green of its oases far below, in a climate where it was still summer. We climbed down, until after many thousand feet, we reached the first of the little deeply blue lakes we had seen from the peak, and then, following the ice-stream which flowed from this, we passed through a deep gorge, to other lakes and snow-fields below, and so on down all day, until we left snow behind us, and, till looking up the long distance through which we had come, we could see only the top of Whitney at the end of the vista. In the latter part of the day we traveled for over two hours through burnt or burning forests, always keeping on or near the bed of the stream, and amidst scenery which I remember nothing to equal.

From this, it seems clear that Langley followed, in a reverse direction, much the same route that Muir had used with Bailey and Washburn in 1875. It is strange that for nearly fifty years thereafter this very convenient and attractive approach to the mountain was neglected.

Langley concludes his narrative with the statement:

I hope I have made plain my own belief that Mount Whitney is an excellent station for the purpose for which it was chosen. The great drawback in our case was the inability to remain at the very summit, for to do this requires a permanent shelter, but a railroad will shortly run through Inyo Valley, and from this, by the aid of an easily con-

structed mule-path, the ascent of the very highest peak can be made in a day, while the telegraph will put it in direct communication with Washington. [...] It is most earnestly to be hoped that something more than a mere ordinary meteorological station will be finally erected here, and that the almost unequaled advantages of this site will be developed by the Government.

Professor Alexander McAdie, commenting on Langley's work, wrote in 1910:²⁰

The importance of the observations then made has not been fully understood nor appreciated even by scientific workers. To the people at large comparatively little has been made known. In the coming years, as the various problems of solar and stellar atmospheres press for solution, a truer appreciation of Langley's high-order work in connection with the solar constant and the absorption of energy by the earth's atmosphere will be had. Not the least in his long line of honors, it seems to me, is the credit due him for farsightedness and sagacity in selecting the site, suitable for work, and the attempt to demonstrate the truth of his belief.

Langley's opinion of the suitability of Mount Whitney as a site for scientific observations was concurred in by two other eminent scientists in 1908, when Dr. W. W. Campbell and Dr. C. G. Abbot, representing, respectively, Lick Observatory and the Smithsonian Institution, recommended the erection of the stone structure that now stands on the summit.

²⁰ "The Observatory on Mount Whitney," by Alexander McAdie, in S. C. B. 1910, vii:3, p. 142.

SIERRA CLUB

Founded 1892

MILLS TOWER, SAN FRANCISCO, CALIFORNIA



THE PURPOSES OF THE CLUB ARE: *To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and co-operation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada.*

JOHN MUIR, President 1892 to 1914

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WHAT THE SIERRA CLUB HAS DONE AND WHAT IT STANDS FOR

Those who appreciate the mountains, the forests, and the influence they have, both as centers of recreation and as fountains of inspiration and makers of character, are welcome to become members of the Sierra Club.

It is not necessary to be a mountaineer in the physical or athletic sense, to be eligible for Club membership. There are no physical tests or prerequisites. The Club exists primarily for the purpose of safeguarding those natural scenic resources which growth of population ever endangers. To explore the mountains is the joyous privilege of all who can; but to assist in the preservation of their glories is both a privilege and a duty of conscientious citizens.

The Sierra Club was organized in 1892. John Muir, great mountaineer, scientist, author, and leader in the national park movement, was its first president and continued in that office until his death in 1914. Under his leadership, and since, the Club has ever given support to movements establishing national and state parks, urging legislation to protect natural scenic assets, resisting encroachments on the national parks, and, in coöperation with the Save-the-Redwoods League and other organizations, seeking to preserve a fair portion of the California redwood stand.

Past achievements of the Club include furthering the original movements to set aside as Federal reserves the wonderlands now known as Yosemite and Sequoia national parks; exploring, mapping, and publishing reports on high mountain regions prior to their mapping by the United States Geological Survey; planning trails through the high mountains; and coöoperating with the State of California, the several counties, and the Forest Service in building new trails, for which the Club has given liberally of its own funds.

The John Muir Trail, following the main crest of the Sierra from Yosemite to Mount Whitney, is a conception of the Club.

The Club has coöperated with the California Fish and Game Commission in stocking many lakes and streams in the Sierra. The golden trout of the Mount Whitney region were widely spread in this way.

The Club's library at the headquarters in San Francisco contains a large collection of books, pamphlets, periodicals, and maps on mountaineering, exploration, natural history, geography, geology, botany, conservation, winter sports, and other subjects appropriate to the purposes of the Club. This library is available to the public for general reference.

Through the Frederick Hitchcock Morley Fund a collection of strikingly beautiful large photographs of the Alps, the Himalaya, and other mountain ranges, as well as of the Sierra, has been acquired. This collection is available to schools and societies for exhibition purposes. At the Club rooms there are also many other fine enlargements and photograph albums of mountain scenes.

LODGES AND SHELTER

The Club maintains seven lodges, for the benefit of campers and mountaineers:

1. Le Conte Memorial Lodge, in Yosemite Valley, where a library of outdoor books and an information bureau are maintained.
2. Parsons Memorial Lodge, at the Soda Springs on property controlled by the Club in Tuolumne Meadows, Yosemite National Park.
3. Muir Lodge, in Santa Anita Canyon, within easy reach of Los Angeles.
4. Shasta Alpine Lodge, at timberline on Mount Shasta, where, during the summer season, accommodations are provided for climbers.
5. Harwood Lodge, in San Antonio Canyon near Mount San Antonio, about fifty miles from Los Angeles.
6. Muir Shelter, at Muir Pass on the John Muir Trail, midway between Mount Whitney and Yosemite National Park.
7. Clair Tappaan Lodge, at Norden, on the State Highway, near Donner Pass, especially for winter sports, but used also in summer.

PUBLICATIONS

The Club issues to its members a bimonthly publication under the title of *Sierra Club Bulletin*. The first number each year, in the form of a magazine, contains scientific, historical, and descriptive articles relating to the Sierra Nevada and other mountain ranges, records of interest to the Club members, and numerous illustrations. The other numbers during the year are devoted to matters of current information and notices to members. Special publications are issued from time to time. Those now available are Starr's "Guide to the John Muir Trail," Farquhar's "Place Names of the High Sierra," and Le Conte's "Ramblings." A complete list of the Club's publications was printed in the magazine number of the *Sierra Club Bulletin* for 1934.

OUTINGS

The Club has for many years conducted annual outings into the High Sierra, with occasional expeditions to other sections of the West. About two hundred Club members participate in these interesting high-mountain trips, which occupy a month in mid-summer. Members of other mountaineering and outdoor clubs are welcome. The 1935 outing will be held in the Kings River region, July 5th to August 3d. Further information may be obtained from the Secretary. Shorter outings are organized occasionally by the respective chapters.

OTHER ACTIVITIES

Winter sports, including skiing and winter mountaineering, are actively engaged in during the season.

Rock-climbing practice is held, under instruction and guidance of skillful leaders, preparatory for the more difficult climbs in the Sierra.

CHAPTERS

For the purpose of conducting local activities, such as week-end trips, lectures, and social events, designed to promote acquaintance with the Club's major purposes, chapters are provided for in the By-Laws. Chapters now organized are: Southern California, Riverside, San Francisco Bay, and Loma Prieta. Schedules of chapter events may be obtained from the respective chairmen or secretaries, or from the general headquarters of the Club.

REPORTS OF OFFICERS AND COMMITTEES

TREASURER'S REPORT

To the Directors of the Sierra Club:

The following report on the finances of the Sierra Club for the year ended December 31, 1934, is respectfully submitted.

WALTER L. HUBER, Treasurer

Received:

GENERAL FUND

Dues from 357 new members	\$1,301.00
Dues from 1485 regular members at \$4.00	5,940.00
Dues for former years	532.00
Dues paid in advance	66.00
Dues at special rates	<u>84.00</u>
Total dues received	\$7,923.00
Income from Permanent Fund	778.88
Sale of SIERRA CLUB BULLETIN	44.70
Sale of Place Names of the High Sierra	33.00
Sale of Ramblings Through the High Sierra	15.50
Interest on General Fund savings account	<u>13.41</u>
Total miscellaneous receipts	885.49
Total received	<u>\$8,808.49</u>

Disbursed:

General Administration:

Salary of Assistant Secretary	\$1,353.46
Extra clerical help	124.00
Office and storeroom rent, Mills Tower	1,170.00
Office expense, postage, stationery, etc.	357.39
Telephone and telegraph	95.89
Election expenses	115.57
Traveling expenses—Directors' meeting	115.00
Insurance	<u>32.40</u>
	\$3,363.71

Sierra Club Bulletin:

Printing magazine number	\$2,178.15
Illustrations—photographs and plates	226.55
Mailing	<u>72.83</u>
Total	2,477.53
Less receipts from advertisements	<u>75.00</u>
Net cost of magazine number	2,402.53
Printing bi-monthly numbers	243.99
Mailing	<u>141.74</u>
	2,788.26

*General Fund (continued)***Contributions:**

Clair Tappaan Lodge	\$ 675.00
Lodge Current Fund	<u>450.00</u>
	1,125.00

Bal
C
E**Chapters:**

Southern California	\$ 771.75
San Francisco Bay	519.25
Riverside	48.00
Loma Prieta	<u>69.50</u>
	1,408.50

Bal
F
M**Miscellaneous:**

Library	\$ 11.28
Room	53.62
Dues to other organizations	12.00
Taxes	51.20
Premium on bond for Permanent Fund	39.84
San Francisco schedules	46.35
Motion picture film	<u>25.00</u>
	239.29

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Total disbursed	<u>\$8,924.76</u>
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1**Summary:**

Total received	\$8,808.49
Balance December 31, 1933	<u>598.03</u>
Total	\$9,406.52
Total disbursed	<u>8,924.76</u>

Ba
Re*Balance December 31, 1934:*

Crocker First National Bank, commercial account . . .	\$ 436.46
Crocker First National Bank, savings account . . .	20.30
Office cash fund	<u>25.00</u>
	<u>\$ 481.76</u>

D
Ba**Received:**

PERMANENT FUND

Eleven life memberships	\$ 550.00
Transfer from General Fund	39.84
Balance December 31, 1933	<u>19,758.25</u>

\$20,348.09

F

Disbursed:

Clair Tappaan Lodge	<u>500.00</u>
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REPORTS OF OFFICERS AND COMMITTEES

99

Permanent Fund (*continued*)*Balance December 31, 1934:*

Crocker First National Bank, savings account . . .	\$ 6,855.75
Bonds (par value \$13,000)	<u>12,992.34</u>
	<u>\$19,848.09</u>

OTHER PERMANENT FUNDS

Balance December 31, 1933 and 1934:

Robert S. Gillett Fund	\$1,000.00
Memorial Lodge Fund	<u>5,000.00</u>
Total, represented by bonds (par value)	<u>\$6,000.00</u>

Received:

LODGE CURRENT FUND

Income from Gillett and Memorial Lodge funds . . .	\$ 275.00
Sierra Club General Fund	450.00
Balance December 31, 1933	<u>347.84</u>
	\$1,072.84

Disbursed:

Shasta Lodge expenses	425.00
Less contributions	<u>250.00</u>
Net expense	175.00
Salary of Le Conte Memorial Lodge custodian . . .	150.00
Parsons Memorial Lodge improvements	<u>457.43</u>
Total disbursed	<u>782.43</u>

Balance December 31, 1934:

Wells Fargo Bank & Union Trust Company	<u>\$ 290.41</u>
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Received:

NATIONAL PARKS FUND

Interest on savings account	\$ 63.07
Balance December 31, 1933	<u>2,278.74</u>
	\$2,341.81

Disbursed: No disbursements.*Balance December 31, 1934:*

Crocker First National Bank, savings account	<u>\$2,341.81</u>
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SUMMARY OF FUND BALANCES

Funds:	Jan. 1, 1934	Net Change	Dec. 31, 1934
General	\$ 598.03	—	\$ 481.76
Permanent	19,758.25	+	<u>89.84</u>
Gillett	1,000.00	1,000.00
Memorial Lodge	5,000.00	5,000.00
Lodge Current	347.84	—	57.43
National Parks	2,278.74	+	<u>63.07</u>
	<u>\$28,982.86</u>	—	<u>\$28,962.07</u>

SHASTA ALPINE LODGE

The 1934 season was characterized by fine weather from the opening, May 15th, to the closing, October 23d. During this period there was slightly over an inch of rain and a few inches of snow, the latter in late September. The highest temperature was 77 degrees; water froze every month except August. There were 434 visitors, many of them, I regret to say, more interested in loafing around the Lodge than in climbing the mountain. I take this opportunity to ask those who come to the Lodge, especially those who camp out near by, to refrain from cutting boughs from young trees.

Visitors were registered from a number of far-away countries, notably Scotland, New Zealand, Australia, and Tasmania, and it was a great pleasure to entertain such fine gentlemen. Only about 35 members of the Sierra Club visited the Lodge. On July 3d there occurred the first fatal accident since the Lodge was built when Mr. Sydney Schlesinger fell from the Red Banks while climbing alone in advance of a party. Sliding rapidly down the steep icy snowfield, he hit some rocks and died just as his body reached the other climbers. An unusually young climber made the ascent to the summit, Arthur Armstrong, nine years old, the second of that age to accomplish the feat, so far as I know, the first being Geraldine Mazza in 1923.

Receipts:

Sierra Club	\$175.00
M. Hall McAllister	100.00
Mount Shasta City	100.00
Siskiyou County	25.00
McCloud River Lumber Company	25.00
Total Receipts	<u>\$425.00</u>

Expenditures:

Custodian's salary (J. M. Olberman)	\$300.00
Pack-train and mail-carrier (W. A. Barr), weekly	125.00
Total Expenditures	<u>\$425.00</u>

J. M. OLBERMAN, Custodian

M. HALL McALLISTER, for the Lodge Committee

LE CONTE LODGE

The spring of 1934 opened unusually early in Yosemite. The black oaks were in foliage weeks ahead of time and the fine weather brought a corresponding influx of travel. Even before the first of May visitors were at our door. Camp Curry closed its season after Labor Day and this Lodge its door on September 15th. Dr. and Mrs. Badè honored us with a visit during the celebration of John Muir's birthday in which he was the leading spirit. The long hot sum-

mers of the past few years have caused considerable deterioration of the extensive shake-covered roof of the building and although it did not leak, due mainly to its steep pitch, it was open to criticism as when a stray sunbeam found its way through and glinted on the floor. In the fall it was gone over and repaired—a long tedious job, what with the safety precautions necessary and the difficulty of identifying on the outside surface the openings so apparent from within. It should now be good for a number of years longer.

F. C. HOLMAN, Custodian

MOUNTAINEERING NOTES

A SOLO TRIP IN INYO NATIONAL FOREST

BY A. H. MARSHALL

Having climbed the summits of Washington, Oregon, and California, in 1930 it occurred to me to attempt the other states of the Union. After climbing Boundary Peak, Nevada, elevation 13,145 feet, I acquired a desire to traverse the crest of the White Mountains, but did not get around to it until this year. Leaving Queen Station, Nevada, at 11:30 A.M., June 26, 1934, I proceeded up Queen Canyon and Trail Canyon, and spent the night there. The next day I ascended Boundary Peak via the east ridge, arriving on the summit at 4:30 P.M., and, seeing no better place to camp, I dug into the frozen gravel about 25 feet below the summit of Boundary Peak for the night and crawled into the sleeping-bag at 6:30 P.M. to keep warm. June 27th I got started at 4:55 A.M., and dropped about 400 feet to the saddle and across the state line into California but failed to find boundary post 60 which may have been covered by snow; from the saddle I ascended about 700 feet to the summit of Mount Montgomery, California, elevation 13,442, arriving on top at 8:05 A.M. The only records I could find there beside the B. M. was a note by Charles Lawrence Baker and John Peter Buwalda of the University of California, dated June 25, 1912. Starting down the southwest ridge of Mount Montgomery at 8:30 A.M., I encountered some rather difficult going with a 45-pound pack, having actually to climb down in two places, but I reached the saddle, elevation 12,100, south of the mountain at 12:25 P.M.; then climbed to approximately 13,000 feet by 4:40 P.M. and called it a day, making my bed within reach of a snow bank, temperature 53 in the sun at 6:00 P.M., Mono Lake visible, shining brightly in the sun.

On June 29th it was 30 above at 4:45 A.M. and I was glad to get moving, passing over an unnamed point, 13,575 feet in elevation, and on to another 13,500 feet high, traveling on snow until 10:30 A.M. Crossing Pellisier Flats, I had to descend to the watershed between Cabin Creek on the east and Birch Creek on the west, elevation 10,800. I then climbed to 12,500 feet and quit, expecting that I could reach White Mountain by 9:00 A.M. the following day, it appeared so close. At this camp I placed a cup of water nearby to see how much ice would form and the next morning it was frozen solid.

On June 30th I got going at 4:35 A.M. and was unable to reach White Mountain until 1:40 P.M. Just north of White Mountain I encountered a ridge so eroded on each side that nothing is left but a line of impassable gendarmes and I was compelled to drop down a couloin full of loose rock for about 400 feet, then climb up a very steep slope, partly loose rock and partly mud, to reach the col directly adjoining White Mountain. Intending to leave my pack at the base of the final peak while I climbed, the compass indicated the side I wanted to descend was practically opposite, so I had to lug the pack to the top through about 300 feet of snow, going in to the knees about

half the time. After spending a delightful hour on the summit, 14,242 feet, with the temperature 56 degrees, and having probably the most comprehensive view of practically the entire Sierra Nevada to be had anywhere, I descended the southeast slope and proceeded to McAfee Meadow for the night, camping at about 12,100 feet, with the difficult part of the trip behind me.

On July 1st I had only to find the Piute Creek Trail as far as the head of the North Fork of Sacramento Creek Canyon, from which point a graded trail led to the mouth of Piute Creek Canyon, then a road to Chalfant Station, where I arrived at 3:55 P.M. From Tuesday evening until 4:00 P.M. Friday I had only snow water to drink, and it is far from satisfactory. I noted a cony (*ochotona schisticeps*) on Mount Montgomery, at over 13,000 feet, and a marmot north of Cabin Creek, at about 11,000 feet, but no other mammals. The rosy finches were fairly numerous, and I saw a Clark nut-cracker on Montgomery, also a dragonfly on the snow about 100 feet below the summit of White Mountain.

MOUNTAIN-CLIMBING ON THE 1934 OUTING

NOTES BY GLEN DAWSON

The climbing on the 1934 Outing was largely in three centers—the Cathedral group, the Lyell Fork of the Merced group, and the Sawtooth group. Owing to the large number of climbers, these notes must be limited to a very concise record, with special mention of only a few of the more important or unusual ascents.

Cathedral Peak (not to be confused by the stranger with Cathedral Spires or Cathedral Rocks, in Yosemite).—Climbed July 7, by John Cahill and Charles W. Burkett, Jr. July 8, Ted Waller led a party including Louise Hildebrand, Milton Hildebrand, Helen Le Conte, Neil Ruge, George Shochat. July 22, climbed by Julie Mortimer and May Pridham. Motion pictures were taken by Nathan Clark, July 22, of Lewis Clark, Jack Riegelhuth, and Glen Dawson on the west pinnacle, and of Riegelhuth and Dawson on the narrow pinnacle near the summit (first climbed by Jules Eichorn in 1931).

Unicorn Peak.—Marjory Bridge and Glen Dawson led the following party, July 8: Virginia Adams, Nelson Best, Madeleine Bond, Ray Brothers, Muir Dawson, Janie Elston, Dorothy Hikes, Elizabeth Mason, Wandalee Nickell, David Parish, Doris Rowlands, Richard Stoy, Helen Sully, George Wilson. July 21, climbed by Ted Waller (leader), Helen Burton, Rose Huston, Louise Schubach, Helen Simpson. Also climbed, July 8, by Jack Riegelhuth (leader), Arthur Atkins, Charles Burkett, John Cahill, Julie Mortimer, May Pridham.

Cockscomb.—July 21, climbed by Ted Waller. July 22, Neil Ruge (leader), Virginia Greever, Allan MacRae, Edward Taaffe. Also climbed, July 8, by Jack Riegelhuth (leader), Arthur Atkins, Charles Burkett, John Cahill, Julie Mortimer, May Pridham.

Echo Ridge.—The difficult ascent of the highest point was made July 9 by

Ted Waller (leader), Marjory Bridge, Louise Hildebrand, Milton Hildebrand, Julie Mortimer, May Pridham, Jack Riegelhuth.

Echo Peaks.—Climbs were made July 16 by Ted Waller (leader), Anthony F. T. Chorlton, Louise Hildebrand, Milton Hildebrand, and on July 22 by Julie Mortimer and May Pridham.



ROUTES ON MACLURE AND LYELL FROM THE MERCED BASIN

M—Maclure

L—Lyell

The first Sierra Club party climbed by the route, a-b-c-b-d-e-d-f

Lyell and Maclure.—Several routes were found for ascending these peaks from the head of the Lyell Fork of the Merced. July 11, Ted Waller and Marjory Bridge (leaders), Ray Brothers, John Cahill, Leland Curtis, Louise Hildebrand, Helen Le Conte, May Pridham, Helen Simpson climbed Maclure, crossed over to Lyell and returned from the col between them. July 12, Jack Riegelhuth (leader), Charles Burkett, Edward Grubb, Peter Prubb, Malcolm Smith, Tyler Van Degrift climbed Lyell via the Maclure-Lyell col. Glen Dawson (leader), Tony Chorlton, Milton Hildebrand, Elizabeth Mason, David Parish, Thomas Saunders, George Shochat made an ascent of Lyell by the south side.

Peak 12,300 (southwest of Maclure).—A first ascent was made by Julie Mortimer and May Pridham.

Electra Peak.—There is some uncertainty as to which of two peaks this name pertains. The origin of the name is also obscure. The peak designated on the U. S. G. S. map as Electra (12,462 feet), was climbed July 12 by Ted Waller (leader), Kasson Avery, Helen Burton, Edwin Fox, Honora McCarty, Jean Scupham, Jane Stevens, Richard Stoy, Helen Sully. A peak of almost equal height, to the north, was climbed by Kenneth Hartley, and later by Julie Mortimer and May Pridham.

Mount Ansel Adams.—On July 11 Neil Ruge, Jack Riegelhuth, and Glen

Dawson climbed a prominent peak standing above the Club's camp on the Lyell Fork of the Merced and named it for Ansel Adams, in recognition of his services to the Club as an outing leader and as a photographer. The choice of his name for this particular peak was suggested by the photograph taken by him, published in the SIERRA CLUB BULLETIN in 1922 (xi:3, plate lxxv). On July 13 dedication ceremonies were conducted on the summit by a party under leadership of Neil Ruge and John Cahill, including Ansel Adams, Virginia Adams, Nelson Best, Marjory Bridge, Nathan Clark, Elizabeth Cuthbertson, Elsie Bell Earnshaw, Francis Farquhar, Kenneth Hartley, Louise Hildebrand, Milton Hildebrand, Helen Le Conte, Mary Saylor.

Other climbs from Lyell Fork Camp.—Ray Brothers led a party of eleven to Long Mountain. Foerster Peak was climbed, July 11 by A. F. T. Chorlton and A. H. Marshall; July 12, by Ansel Adams; and, on the 13th, a traverse was made from Mount Ansel Adams to Foerster Peak by Marjory Bridge, Louise Hildebrand, and Helen Le Conte, who climbed, en route, an unnamed peak, about 12,000 feet, presumably a first ascent.

Hoffmann—"The Thumb."—Near the summit of Mount Hoffmann stands a prominent pinnacle, much eroded by weather, known as "The Thumb." So far as is known, the first person to climb it was Jules Eichorn, October 16, 1932. Under skilled leadership, and with the protection of the rope, two parties from the Ten Lakes Basin camp of the 1934 Outing reached the top: July 19, Ted Waller and Jack Riegelhuth (leaders), Ray Brothers, Charles Burkett, John Cahill, Kenneth Hartley, Dorothy Morris, Julie Mortimer, David Parish, May Pridham, Jean Scupham; and July 20, Neil Ruge, Milton Hildebrand, Glen Dawson, Muir Dawson. On the latter climb Muir Dawson, belayed from the top, made the first ascent of the upper side of the pinnacle; all other ascents were made from the side away from the summit of the mountain. On the descent, all four went down by Muir Dawson's route. (Muir Dawson was, at the time, 13 years old, and weighed 75 pounds.)

Other climbs from Ten Lakes Basin.—A large party climbed Grand Mountain; about forty went down to the point from which Muir Gorge can be seen and where the register is placed. Both summits of Double Rock, on the rim of Tuolumne Canyon, were climbed July 18 by Glen Dawson (leader), Joel Hildebrand, Milton Hildebrand, Dorothy Morris, David Parish, May Pridham—no record of previous ascent. Two parties traversed Peak 10,670 and found no sign of previous ascent. Sixteen persons climbed Tuolumne Peak.

The Three Teeth.—July 25, Jack Riegelhuth and Glen Dawson climbed the East Tooth by the eastern arête. An interesting route was found through the tall pinnacle by a sort of tunnel. They continued to the Middle Tooth, where it was discovered that Kenneth May had claimed his famous birthday cake but had left a piece marked for Mr. and Mrs. Leonard. At that moment the Leonards made their appearance on the summit of the West Tooth. After some steep climbing, with fine leading by Riegelhuth, the parties were joined on the West Tooth. A descent by the west arête and a rope-off to the north completed the first traverse of the Three Teeth from east to west. July 27,

Julie Mortimer and May Pridham added to their many fine achievements as "manless" climbers by making a traverse of the West Tooth up the north side of the arête west of the peak, thence along the arête.

The Doodad.—The first ascent of this peculiar block on Sawtooth Ridge was made July 7, before the arrival of the Outing party, by Howard Twinning and Kenneth May. It was again climbed July 25 by two separate parties—May Pridham and Julie Mortimer, and Hervey Voge and David Brower. July 26, Lewis Clark, John Cahill, and Tony Chorlton climbed it, after an ascent of the highest point of Sawtooth Ridge. July 27, it was climbed by a large party, which also climbed Sawtooth Ridge—Ted Waller (leader), Samuel Abbot, Charles Burkett, Muir Dawson, Peter Grubb, Edward Maples, Dorothy Morris, Doris Rowlands, Louise Schubach. On the same day it was climbed by Glen Dawson and Jack Riegelhuth. Twenty persons have now climbed the Doodad.

Other climbs from Matterhorn Canyon.—Whorl Peak was climbed July 24, after a traverse from South Whorl, by Glen Dawson, John Cahill, Tony Chorlton, Lewis Clark, Virginia Greever, Jack Riegelhuth, and July 25 by Norman Clyde (leader), Kasson Avery, Everett Mansur, Dorothy Morris, Doris Rowlands, Gertrude Rutz, Stuart Ward, Erma Whannel. Another party of seven, July 24, climbed South Whorl. Two parties climbed Finger Peaks: July 25, Lewis Clark, Allan MacRae, Carl Scheerer traversed from west to east; July 26, Charles Burkett, Edward Maples, Edward Taaffe made the ascent by the west ridge. Several parties climbed Doghead Peak. Cleaver Peak was traversed from east to west by two parties: May Pridham and Doris Rowlands, Jack Riegelhuth and Glen Dawson. It was also climbed by Everett Mansur, Carl Scheerer, Stuart Ward. Blacksmith Peak was climbed by Ansel Adams, Glen Dawson, Jack Riegelhuth. Forty-seven persons, in parties led by Lewis Clark, Norman Clyde, and Ted Waller, climbed Matterhorn Peak. (The name is, of course, hardly appropriate, but was given many years ago to one of the peaks in this vicinity because of its fancied resemblance, when seen at a distance, to the famous peak of the Alps. It is not certain which peak was intended.—EDITOR.)

Climbs from Benson Lake.—Parties climbed Piute Mountain, Volunteer Peak, Regulation Peak, Pettit Peak. On Suicide Ridge and Bath Mountain, visited by Glen Dawson and John Cahill, no cairns were found. A first ascent of Peak 10,500, southwest of Rock Island Lake, was made by Lewis Clark and Virginia Greever. Near the Benson Lake camp a rock-walled amphitheater furnished excellent opportunities for practice climbs, instruction, and exhibitions, under supervision of the Mountaineering Committee.

Other Climbs.—Fairview Dome, Vogelsang Peak, Rafferty Peak, Johnson Peak, Mount Florence, and Mount Dana were climbed by members of the Outing party. Two groups climbed Simmons Peak, and explored and climbed the ridges and peaks nearby. Mount Conness was climbed by the glacier and northeast face, July 22, by Charles Burkett, John Cahill, Edward Maples. Others climbed it by the usual route.

THE CATHEDRAL SPIRES

BY RICHARD M. LEONARD

The Higher Spire.—The first ascent by Bestor Robinson, Jules Eichorn, and Richard M. Leonard, on April 15, 1934, has already been chronicled—"The First Ascent of the Higher Cathedral Spire," by Bestor Robinson, in *SIERRA CLUB BULLETIN*, xix:3, June, 1934, pp. 34-37; and "Piton Technique on the Cathedral Spires," by Richard M. Leonard, in *Appalachia*, xx:9, December, 1934, pp. 177-183. The second ascent was made on August 25, 1934, by H. B. Blanks, Boynton S. Kaiser, and Elliot Sawyer. There were no unusual incidents in the climb except that some pitons in the chimney above Second Base were found to be loose. These may have been certain pitons that could not be removed, although found unreliable, on the former ascent, or the looseness may have been due to the successive expansion and contraction of the rocks in the interval. It is an imperative precaution that *every* piton left from a preceding climb be tested thoroughly before placing reliance upon it. On October 27, 1934, Marjory Bridge, Jack Riegelhuth, and Ted Waller made the third ascent. They also found that the same series of pitons required careful testing. This climb, together with an ascent of the east face of Mount Whitney with Jules Eichorn on August 17, 1934, places Marjory Bridge (now Mrs. Francis P. Farquhar) in the front rank of the women climbers of America.

The Lower Spire.—The first ascent of the lower spire was accomplished on August 25, 1934, by the same team that conquered the Higher Spire—Robinson, Eichorn, and Leonard. This climb, also, is described in *Appalachia*, December, 1934. As on the earlier climb, the leadership was in rotation. In November, 1933, we attempted the ascent, but were unable to complete it. We succeeded, however, in putting in a number of pitons, which greatly expedited our progress on the subsequent climb. On the whole, the climb was much easier than that of the Higher Spire, although one portion, the "Flake," was far more difficult than anything on the latter. For that reason it is recommended that those who wish to climb the Lower Spire become familiar with the problems of the Higher Spire first.

The first pitch on the Lower Spire is quite severe; it is likely, therefore, to serve as an effective barrier to all who lack the qualifications for undertaking the rest of the climb. It took our party an hour and a half to work out the route and surmount this pitch; after which we proceeded without delay up the chimney on the southwest face to the main ledge that constitutes the half-way point in the climb. There we were halted by a sixty-foot pitch at an angle of about 85 degrees. After three hours, in which we changed lead six times, we had succeeded in placing pitons half-way up the pitch. Then the cracks ended and we were confronted with the alternative of a twenty-foot traverse along a two-inch ledge or the ascent of the "Flake."

The Flake is a very thin sheet of granite, thirty feet high and twenty feet broad, standing out about ten inches from the main cliff. At the outer edge it is not more than a quarter of an inch thick, and two feet in from the edge its thickness is only two inches. Because of this thinness, an attempt to make

the ascent by pushing, as in a chimney, or by pulling, as in a "lay-back," would result in breaking off large sections. We proceeded to throw a loop of rope over a point of the Flake about four feet away and anchor it to a piton in a crack below. Aided by this rope, the leader was able to get a leg over the point above and with the piton-hammer knock out a series of nicks in the edge of the Flake. To provide extra assurance of safety, the climber was protected by two ropes, each passing through a separate piton to a separate belayer. After the nicks had been formed, the leader cautiously ascended this fragile edge, and the Flake was conquered. Once up, by straddling the horizontal upper edge, he was able effectively to belay the others while they climbed to the second big ledge.

The next pitch required the placement of several pitons as direct aids. After an hour and a half it was surmounted, and the difficult climbing was over. The final climb to the summit was made without belays.

On October 20, 1934, Blanks, Kaiser, and Sawyer made the second ascent. By the use of a carabiner in the loop of the rope they increased the safety factor on the point of the Flake, and they greatly improved upon the former route above the second ledge.

* * *

THE RECORD ON MOUNT YOUNG

BY FRANCIS P. FARQUHAR

Mount Young (13,187 feet), standing just north of the trail from Crabtree Meadow to Mount Whitney, has been passed by innumerable mountain-climbers on their way to the higher peak, yet only three parties appear to have deviated from the customary route to climb it. Last summer, on July 24, J. H. Czoch (member of the Sierra Club and of the Appalachian Mountain Club), with Mrs. Mildred Czoch, made the ascent and brought back a copy of the record left by their predecessors. Thirty-two years before, on July 17, 1902, the following had left their names: C. W. Hyde, Chas. H. Edwards (Azusa), Ernest D. Core (Bakersfield). The other side of the paper, which was found in an old-fashioned tin can under a cairn, reads as follows: "Know all men! that I hereby on the 7th day of September 1881 do name this Mountain 'Young' in honor of Prof. Charles Young now of Princeton and formerly Prof. at Dartmouth College—in witness whereof I have hereon erected this monument as a perpetual memorial. Situation—N. W. of Mt. Whitney, Distance about 3 miles. About N. of Mt. Hitchcock and about two miles distant. Fred H. Wales."

The Rev. Frederick Henry Wales accompanied William B. Wallace and J. W. A. Wright on a trip to Mount Whitney in 1881. In the remarkable, and exceedingly rare, pamphlet entitled "A Guide to the Grand and Sublime Scenery of the Sierra Nevada in the Region About Mount Whitney," published in San Francisco by W. W. Elliott & Co. in 1883, a number of episodes of this trip are recorded, from information furnished by Wright. The ascent of Mount Young is mentioned, as follows: "Mount Young, one of the many huge peaks in that vicinity, was never named until that summer. Mr. Wales

ascended it alone, on Tuesday, September 7th, with instruments, to take its altitude, build a monument and leave a record of its name, and the name of another handsome peak just south of it, which from his suggestion, was named Mount Hitchcock. . . . With our aneroid, Mr. Wales found that the altitude of Mount Young is about 13,600 feet, the mercury of the standard thermometer showing a temperature in the shade (on the summit) of 48°, and in the sunshine 66°. He built a monument some five feet in height, and in it placed the record of the naming of Mount Young and Hitchcock." (Pp. 49-50.) Evidently, the writer was mistaken about the mention of Mount Hitchcock in the record on Mount Young. A pencil note by Wales in my copy of the pamphlet says, apropos of Mount Hitchcock: "I climbed it also." It remains, therefore, for someone to climb Mount Hitchcock and see if a similar record is to be found on its summit.

ROCK-CLIMBING IN OREGON

BY GLEN DAWSON

A. F. T. ("Tony") Chorlton, of the New Zealand Alpine Club, and I spent a few days climbing in Oregon following the 1934 outing of the Sierra Club. Our first venture was Mount Thielsen (9178), a dominating peak just north of Crater Lake National Park. Although described by the National Park Service as the "Matterhorn of the Cascades" and as a difficult climb, we found that it did not require the use of a rope. The colorful volcanic formations and the view made the climb well worth the half-day trip from Diamond Lake. From Bend there is a variety of fine climbs. Three Fingered Jack (7848) is a spectacular peak reached from the new Santiam Highway and Square Lake. Our companions were two members of the Skyliners, Cris Kostol, who has led many parties up the peak, and Miss Donna Beesley, our agreeable hostess. We found the actual climb up the south arête to be a short one. The view of Mount Jefferson to the north and Mount Washington and the Three Sisters to the south seemed finer because of the extremely narrow point from which we viewed them. The following morning, August 11th, after a night's camp at Big Lake, we left the car at the National Forest boundary line on the old Santiam Highway, and Miss Beesley skillfully led Tony and me through a dense forest to Mount Washington (7802) which has been called the most difficult rock-climb in Oregon. The route is up the north ridge. The chief difficulty is a dangerous lead across a short traverse and a little chute of rotten rock which tends to break out in small pieces. After a short visit to one of the remarkable lava caves near Bend, Tony and I continued to Mount Rainier and the Canadian Rockies.

MOUNT WHITNEY—NEW CLIMBS AND OLD RECORDS

BY MARJORIE BRIDGE FARQUEHAR

The east face of Mount Whitney was climbed for the second time, July 4, 1934, by Glen Dawson and Ted Waller, and for the third time, August 17, 1934, by

Jules Eichorn and Marjory Bridge. Dawson and Eichorn were members of the party of four who made the first ascent on August 16, 1931. (S. C. B., 1932, xvii:1, pp. 53-58.) Glen Dawson was also a member of the party, which included Richard M. Jones and Walter V. Brem, that made the first, and, so far, the only descent by this route, September 6, 1931.

On the climb last August about twenty feet below the summit, Jules Eichorn found a small rusty baking-powder can which contained the names of ten people who climbed the mountain in 1883 and 1885. The first party consisted of Thomas Davidson, Willie S. Bliss (age 17), and George D. Oliver (age 16). They came from Carson City, via Lone Pine, and arrived on top of Mount Whitney, July 30, 1883. Their names are written on a postal card, and on another are the names of Chas. Forman, F. R. Bliss, and D. L. Bliss. Mr. William S. Bliss states that these cards were written before the ascent and that the three last named did not climb the mountain. On the other side of one of the cards and on a small piece of paper are the names of the following, all from Bakersfield, who made the ascent August 7, 1883: Ella B. Roper, Jennie Jameson, Jack Jameson, Samuel Allen, Jeff Carver, Charles Roper. On August 8, 1885, the name of C. T. Bliss was added. Inquiry has disclosed that, of the ten climbers whose names appear on these records, all but two (Mr. Davidson and Mr. Jameson) are still living. Mr. C. T. Bliss says that with him in 1885 were Thomas Magee, R. J. Laws, D. A. Bender, and a guide from Lone Pine named Vasquez. Mrs. Landers recalls the incidents of the trip vividly. The full names of the Bakersfield party are: Mrs. George Landers (Ella B. Roper), Miss Virginia Jameson, John McKnight Jameson, Samuel Allen, Henry J. Carver, Charles A. Roper.

RODGERS PEAK—APEX OF TWO GREAT CANYONS

BY JOHN J. MAZZA

I know of no place in the Sierra that affords a more inspiring and fascinating panorama than that presented from a point on the west side of Rodgers Peak, about two hundred feet from the summit, to which I climbed during the 1934 outing of the Club. It was my intention, on July 12, to join the party bound for Electra Peak, but I missed them by taking the western instead of the eastern side of that great boulder-strewn basin of the Lyell Fork of the Merced. From the upper end of the basin, Rodgers Peak (13,036 feet) rears its massive crest between Lyell and Electra. It was a beautiful, clear day. Although I did not fancy the idea of climbing alone, I could not resist the temptation to climb at least to the knife-edge for a view. The climbing was not particularly difficult, requiring only caution because of the many loose rocks. At the knife-edge, I continued up the southwest side to a small level spot just large enough to lie down upon. Above this, the ridge overhangs, and progress beyond would have been very difficult and dangerous, if not impossible, without a rope. As I was alone, I went no farther. Evidently the surveyors who placed the boundary monuments for the national park and national forest came to the same conclusion, for there I found the marker



MOUNTAIN CAMP—MOUNT WHITNEY

(From a sketch by T. Moran)

From a lithograph in Langley's "Researches on Solar Heat," 1884



Northerly View



Southerly View

THE FIRST PHOTOGRAPHS OF THE SUMMIT OF MOUNT WHITNEY
Taken October 3, 1875, by W. E. James



ECHO RIDGE, YOSEMITE NATIONAL PARK
Photograph by Marjory Bridge Farquhar



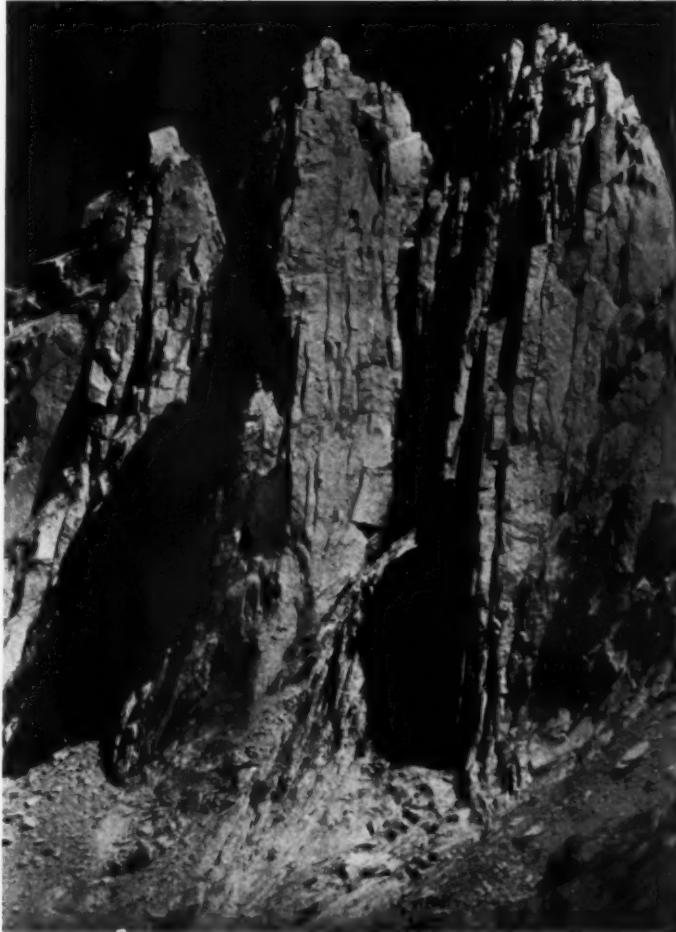
A PINNACLE OF CATHEDRAL PEAK
Photograph by George Shochat



"THE THUMB," MOUNT HOFFMANN
Photograph by George Shochat



CLIMBING BLACKSMITH PEAK, SAWTOOTH RIDGE
Photograph by Ansel Adams



THE THREE TEETH OF THE SAWTOOTH RIDGE
Photograph by Ansel Adams



THE LOWER CATHEDRAL SPIRE
Photograph by Marjory Bridge Farquhar

which was probably intended for the summit. It bore the inscription: "Mark No. 127. U. S. Forest Res.—Yosemite National Park Boundary."

The view was superb. This point is the apex of two magnificent canyons, and one can see almost the entire length of each of them. The great canyon of the Merced stretches away to the west, Half Dome and Clouds Rest being visible in the distance. Without moving a step, just turning the line of vision ninety degrees, one may look straight down the beautiful canyon of the North Fork of the San Joaquin, which finally loses itself in the distant haze. Directly across, seemingly within a stone's throw, rise the majestic peaks of Ritter and Banner, massed against a clear blue sky. These are pictures that will never fade from memory. They are a bountiful reward for the effort of reaching the high places.

AN ASCENT OF MOUNT SHASTA BY THE NORTHEAST RIDGE

BY OLIVER KEEHLIN

In September, 1934, a camp was established on Mount Shasta at an elevation of 11,000 feet, just north of the terminus of Konwakiton Glacier, where, for several days, studies of the glaciers were made. On September 6 we set out for the summit. Our route first followed the contour above the amphitheaters of Clear Creek Glacier and Wintun Glacier. We then crossed the three northerly lobes of Wintun Glacier and the southerly lobe of Hotlum Glacier, and arrived at the ridge that separates the latter from the main body of Hotlum Glacier. This ridge, which is composed of shattered andesite, is easily climbed to the plateau where the snow fields of all the glaciers are merged in one broad body. Just above this plateau rises the summit pinnacle, which is easily ascended on the northwest side. Those who signed the register on the summit were: Norman Clyde, William A. Horsfall, Thomas Hunt, Howard Simcox, Philip Bouret, Oliver Kehlein, Stacy French, and C. W. Reid—the last two being members of the Appalachian Mountain Club. Return to camp was made down the rounded southeastern shoulder well packed with volcanic cinders.

YOSEMITE SCHOOL OF FIELD NATURAL HISTORY IN THE HIGH SIERRA

BY ALLAN CAMERON

After five weeks of concentrated studies in and near Yosemite Valley, the Field School, under leadership of Joseph Dixon and Professor E. O. Essig, made a pack-trip into the northern part of Yosemite National Park. On August 23 the party of twenty-four left Harden Lake and proceeded, via Pate Valley, to Benson Lake and Kerrick Meadow; thence, over Rock Island Pass to upper Slide Canyon, and over Burro Pass to Matterhorn Canyon, where members of the Sierra Club outing party were met. From Virginia Canyon they continued, via Miller Lake, to Glen Aulin, Tenaya Lake, and returned to Yosemite, some by the Forsyth Trail, some by the Snow Creek Trail, and some by Tenaya Canyon. Although mountain-climbing was a minor objective,

several interesting ascents were made, including Piute Peak, Volunteer Peak, Crown Point, Matterhorn Peak, Cleaver Peak, and Finger Peak. Examinations were made of the Matterhorn and Sawtooth glaciers. Later, two members of the school, Ernest Schulz and Allan Cameron, accompanied by George Zentmyer, returned to Tuolumne Meadows in search of specimens of Alpine plants for the Museum, and, in the course of their trip, climbed Dana, Connell, and Unicorn.

A SKI-ASCENT OF MOUNT SAN GORGONIO

A ski-ascent of Mount San Gorgonio was made on February 17, 1935, by Leland Curtis, Stanley Allen, and six others. From six to eight hours were required to reach the shelter hut at 9800 feet, where the night of the 16th was spent. On the following day the summit was reached in two to three hours, and the descent to the snow line at Barton Flats was made by 7 p.m. The snow was difficult, with variations of icy crust, deep powder, and breakable crust. Near the summit there was a good deal of wind-crust. A good many avalanche tracks were seen, and the amount of debris and old snow indicated considerable volume and force.

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BOOK REVIEWS

STARR'S Members of the Sierra Club will welcome with interest and pleasure GUIDE¹ the new guide to the High Sierra by Walter A. Starr, Jr. For many years a guide of this type has been much needed, and we are especially fortunate in having it finally produced by one so thoroughly conversant with the High Sierra as was its author. The writing of a guide to this complex mountain region, with its maze of trails and approaches, is no easy matter. Not only are years of experience necessary to cover personally every foot of the hundreds of miles of trails, but a thoroughly systematic method of presentation must be worked out. This last has been accomplished by using the John Muir Trail as a base. The entire 200 miles of its length has been divided into sections, the description of each forming a chapter of the book. The route of the main trail is described first in detail; then the various routes of approach to the trail, both from the east and from the west, are taken up. The latter consist of railroads or automobile roads into the foothills, and are termed approaches, and of trails connecting the terminals of these with the main trail, which are called laterals.

The book is prefaced by Francis P. Farquhar, President of the Sierra Club, who presents the main objects of the Club, showing that the Starr Guide is directly in line with these objects, and in fact forms a culmination of many years of the Club's activities in exploring the High Sierra. Following this is a tribute to Walter A. Starr, Jr., by Vincent Butler. The book itself begins with an introduction by the author, in which is contained a general description of the region covered, a general account of the roads and other approaches, and sound advice to travelers, based on his own wide experience.

The first chapter contains a detailed description of the trails of Yosemite National Park converging toward the Tuolumne Meadows. Trails to the north and west of the Meadows are also considered, and the final portion of the chapter gives an account of the initial section of the John Muir Trail, namely that from the Tuolumne Meadows to Donohue Pass. The second chapter is typical of the main portion of the guide. It first describes the John Muir Trail from Donohue Pass to Silver Pass, covering the basin of the Middle Fork of the San Joaquin River, followed by several alternate routes through this splendid region. Then the rail and automobile routes of approach from Owens Valley are considered, as well as the many lateral trails over the Main Crest. In a similar way the western approaches and laterals are described. Each section of the High Sierra is taken up in the same general order; the basin of the South Fork of the San Joaquin, those of the Middle and South forks of Kings River, and the Sequoia National Park, which includes the basins of the Kern and Kaweah rivers. Included in the book is an excellent map of the Sierra from the northern boundaries of the Yosemite

¹ *Guide to the John Muir Trail and the High Sierra Region.* By WALTER A. STARR, JR. The Sierra Club, 1934. xiii+145 pages; frontispiece; map in pocket. Price, \$2.00.

National Park to the Lower Kern, printed in three colors, and on a scale of five miles to the inch.

In reading through the guide one is impressed with the fact that it is not merely a compilation of statistics—of routes, distances, and camping places—but is also a charming description of our High Sierra. So greatly did Walter Starr love his mountains that he could not exclude these descriptive parts, even amongst his trail notes. A continuous picture of this glorious region is brought before one familiar with it. In many places the author departs from the trails, and describes knapsack routes and cut-offs with even more zest and joy than the trails themselves. It is easy to see that the highest, wildest, and most rugged of the High Sierra lay nearest the heart of the writer.

J. N. LE CONTE

ROMANCE OF
MOUNTAINEERING²

The title of this book hardly indicates the richness of its contents and the scholarly character of the author's researches. To my mind it is the most pleasing book that has been written on the historical development of mountaineering. It is no small achievement to walk with Gribble and Coolidge and the essayists of the *Alpine Journal* without leaning upon them, but Alpinist Irving proves that he can do it. This is no catch-penny offering written in haste; it is the product of mature study on the part of one who not only knows but loves mountains. Many twice-told tales are repeated, to be sure, but they are set forth after the manner of a learned judge who sums up the evidence and adds a distillation from his own wisdom. For instance, the difficult task of untangling the yarn of the first ascent of Mont Blanc is skillfully performed. Dr. Paccard gains his rightful place without injury to Balmat, who is treated with kindness as well as firmness. Four volumes of Mount Everest history are lucidly epitomized in a few pages, followed by a summary of the German attacks on Kanchenjunga and Nanga Parbat. New protagonists emerge in this book, and certain old ones retire or fail to appear, for the author has his own standards for appraisement. Bragging, and claims upon glory, fail to gain his attention, except occasionally when they call forth slyly humorous remarks. In the recognition of courage and high idealism, however, justification is won for the title of "Romance."

One of the chapters most likely to challenge the attention of the non-British reader is that on "Nationality in Mountaineering." Here, almost for the first time, American mountaineers on their own ground enter within the circle of a British Alpinist's perceptions. If Irving has missed some of the elements of American mountaineering, it is largely our own fault, for, in comparison with European nations, we have had few writers among our climbers. Almost the only ones who have written with distinction are John Muir and Clarence King, and to them Irving extends a welcoming hand. King's astonishing feats are shrewdly appraised. "It is a pity," says Irving, "that King climbed before the age of the cinema had dawned. His ascent of Mount Tyndall as portrayed

² *The Romance of Mountaineering*. By R. L. G. IRVING (member of the Alpine Club, French and Italian Alpine Clubs). J. M. Dent and Sons, Ltd., London. 1935. xiv+320 pages; 41 collotype illustrations; maps and diagrams. Price, 18 shillings.

by him would have made a grand film." Muir is quoted with evident pleasure and appreciation. Of Muir and American mountaineering, Irving says:

"America has produced Muir. That does not mean that Americans approach mountains as he did. It would be as untrue to say so as to say that Englishmen are free from insularity and prejudice because England has produced Shelley. If thousands of Americans can learn to climb and look at mountains as John Muir did, allowing themselves an ice-axe and a map, but taking care not to take his book or any other climbing book with them, or to think that they can experience his emotions by reading him before they have discovered them for themselves, then they will have begun to refute any allegations made about their inability to use leisure, and will have begun training for the missionary work of rejuvenating the old countries. Perhaps I have been unjust in my judgments of American mountaineering in the past; at least I have tried to draw a happy picture of its future."

It is perhaps pardonable if we express our pleasure in finding among the many beautiful illustrations one of our own mountains and by our own artist, Ansel Adams. "Snow Banners of the Sierra Nevada" is well-chosen to portray the charm if not the magnitude of our peaks and suits well the subtle quality that pervades this unusual book.

FRANCIS P. FARQUHAR

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EVEREST No ancient epic of Gods or heroes is more enthralling than the 1933⁸ contemporary struggle to attain the summit of the loftiest mountain on earth. Everest has been flown over, encircled, studied and analyzed in great detail; men have forced themselves by sheer power of will to heights never before attained. But the summit remains inviolate — unless Mallory and Irvine achieved their goal before their tragic disappearance in 1924. There is little chance of that grim secret revealing itself, for it is locked securely in the roar of storms and avalanches, in the vast expanse of icy precipices. The Himalayas are noble opponents. For years men have planned and undertaken expeditions to conquer these giants of Asia. Death, disappointment, and defeat have not broken the spirit or the faith in ultimate accomplishment. Some day Everest will be won; Kangchenjunga, K₂ (Mount Godwin Austin), and other citadels will surely follow. Men like Ruttledge, Shebbeare, Smythe, and such earlier heroes as Bruce, Norton, Somervelle, Odell, and many others, will lead the forces of exploration to ultimate success. Glorious defeats have only strengthened their determination, trial after trial has perfected their method.

All Everest expeditions have experienced the same sequence of preparatory events; the planning and organizing in England, the assembly in India, the long journey into Tibet, the interesting relations with the government and the monasteries of that strange and colorful land, and finally the establishment of a base camp at the Rongbuk Glacier. On Monday, April 17, 1933, a new party was established at the base camp. "A certain feeling of optimism was

⁸ *Everest 1933*. By HUGH RUTLEDGE. Hodder & Stoughton, Limited, London. 1934. xv+390 pages; illustrations; maps.

Attack on Everest. By HUGH RUTLEDGE. Robert M. McBride & Company, New York. 1935. 339 pages; illustrations. Price, \$3.50.

in the air," writes Ruttledge. Optimism triumphed, as usual, in the face of severe strain and disappointment during the following months. On April 21st, Camp I (17,700 feet) was in "full occupation." Camp II (19,800) was established on April 26th; Camp III (21,000) on May 2d. From Camp III the climbers found themselves "looking steeply up at the huge northeast shoulder, 6000 feet of striated slab and avalanche-swept couloir, beyond which, on the right, is a white rock-strewn cone flying a long pennant of cloud and snow far across Nepal. It is the summit." The vast scale of the mountain is deceptive—but the North Col, a mile and a half away, looked "substantial enough." There, in 1922, an avalanche killed seven men. The ice-wall must be climbed; it is one of the major problems of any Everest expedition. Camp IV was established above this ice-wall on the North Col on May 15th. Camp V was set up on May 22d; Camp VI on May 29th. These weeks were fraught with sickness, failures, intense cold and storms, all of which combined to delay, exasperate and weary the personnel. Nevertheless, on May 30th, the first assault of the summit was made by Harris and Wager, followed by Smythe and Shipton on June 1st. The entire expedition then returned to the base camp on June 7th to recuperate from the arduous experiences on the mountain. Another attempt was made; Camp III was reached, but due to the continuous bad weather on Everest and the unfavorable condition of the mountains, it was evacuated on the 23d of June. On July 2d, the return march was begun from the base camp. "As we turned the corner of the moraine we had one more look at Mount Everest. Then the clouds came down for good. We were done with it all."

The book is more than an account of the expedition itself. Eleven chapters constitute the first section, which is an historical resumé and narrative of the expedition. The second section of the book consists of nine chapter, among them: "Some Medical Aspects," by Dr. C. Raymond Greene; "Transport," by E. O. Shebbeare; "A Review of the Geology and Some New Observations," by L. R. Wager; "Himalayan Meteorology," by Dr. S. N. Sen and N. P. Chatterjee. There is an inspiring foreword by Sir Francis Younghusband.

The American edition is substantially the same in content as the one published in England, but the latter is by far the more attractive in appearance. This is due largely to the reproduction of the illustrations. Excellent in themselves, even in the English edition they lose some of their quality because of the sepia tone. In the American edition the quality is much inferior and the pictures lose still more of their value because of the placement on the pages. It is regrettable that the necessity of a lower price for the book in the American market should force such drastic economy.

ANSEL ADAMS

A MANUAL OF EXCAVATION⁴ It is not often that a technical manual is interesting to the layman. But Dr. Badè can make any subject interesting and can endow even a "manual" with news-value. The frontispiece of this little book is a photograph of a finger print of a potter who lived

⁴ *A Manual of Excavation in the Near East.* By WILLIAM FREDERIC BADE. University of California Press, Berkeley. 1934. vii+81 pages; illustrations. Price, \$1.50.

centuries before the time of Christ. "It is no reflection on the characters of ancient potters of Mizpah," remarks Dr. Badè, "to say that we are recording their finger prints with the aid of the noted criminologist August Vollmer, now Professor of Police Administration in the University of California." In the remarkable excavations at Tell en-Nasbeh, in which he has been engaged for several years, Dr. Badè has introduced more than one ingenious device. The reward of this ingenuity, coupled with sound methods of procedure, has been a clearer understanding of the history of cultural and religious influences. It is worthy of remark that Dr. Badè's "Manual" is an admirable example of typographical treatment.

FRANCIS P. FARQUHAR

MOUNTAINEERING Within the past few years there have appeared several important books dealing with mountaineering technique.⁵

Notable among them are "Alpines Handbuch," emanating from the German and Austrian Alpine Club, and "Manuel d'Alpinisme," from the French Alpine Club. It is fitting, therefore, that an authoritative work should appear in English, and, while the volume on "Mountaineering," in the *Lonsdale Library*, is not an official publication of the Alpine Club, it, nevertheless, unmistakably bears its stamp, for every one of the several authors is a member of that club. As might be expected, therefore, the subject is approached in a distinctly conservative way. The first portion of the volume is devoted to various phases of technique, the second to the principal climbing regions of the world. Each subject is treated by an author well-known for his qualifications in the respective field, such as G. Winthrop Young, Willi Rickmers, T. G. Longstaff, J. Monroe Thorington, J. M. Wordie, Phillip Borchers, Sidney Spencer.

A comparison of this book with Young's "Mountain Craft," (1920), discloses very little that is new in the discussion of rock-climbing, except, perhaps, the concession Mr. Young now makes to piton-craft. One cannot but feel that a more up-to-date and comprehensive treatment of rock-climbing technique could have been made. The present-day climber is not easily reconciled to the recommendation of the "middleman's noose," or to the omission of a description of the "body belay." On the other hand, Mr. Young states the case of mountaineering ethics with an authority that may well be accepted as final. The chapters on "Snow and Ice" and "Winter Mountaineering" are progressive and admirable in every respect, and are the best ones in the book.

In the section dealing with mountaineering regions it is interesting to observe the contrast between the points-of-view. Rickmers, for instance, writes of climbing as an informal sport in which enjoyment is the principal aim; others treat it rather as a conventionalized game, with set rules and regulations. Longstaff, on "The Himalaya," and Wordie, on "Arctic Mountaineering" are especially fine. Notwithstanding the prestige of the authors, however, one's confidence in the reliability of the book is somewhat impaired

⁵ *Mountaineering*. [By a number of authors.] The Lonsdale Library, vol. xviii, London, 1934. 383 pages; 130 illustrations. Price, 21 shillings.

by certain inconsistencies and errors. The maps, for instance, which accompany the regional chapters are frequently in disagreement with the text in respect to altitudes and the spelling of names. Moreover, the chapter on North America contains numerous errors that indicate carelessness or disregard of detail: twenty-three distinct errors appear on page 310 alone, among them "10,350" feet for the height of Mount Shasta, instead of 14,162, "14,742" feet for North Palisade, instead of 14,254; and "Rockies" for "Sierra Nevada." The general excellence of the book is not, however, seriously affected by lapses of this character, and it is welcomed as a valuable addition to the literature of mountaineering.

RICHARD M. LEONARD

ALPINE Dr. Kugy writes as a lover of mountains. He had the good PILGRIMAGE⁶ fortune to live close to the Julian Alps and to have the opportunity of exploring their crags before tourists came among them and routes became known. "Day and night," he says, "I can still hear the call of the mountains. But now, in place of myself, I send thither the young men, my enthusiastic and faithful friends, to bear my old banner." And, again, "It is to the young, above all, that this book would speak, and perhaps in a new age it may find a way to their hearts." By reading it one may have the privilege of friendship with a man of rare character.

OTHER BOOKS RECEIVED

Eskimo Year. A Naturalist's Adventures in the Far North. By GEORGE MIKSCH SUTTON. The Macmillan Company, New York. 1934. xii+321 pages; illustrated with drawings and photographs. Price, \$3.00. (Besides natural history, contains many valuable suggestions for living in snow and intense cold.)

Roaming American Playgrounds. By JOHN T. FARIS. Farrar & Rinehart, New York. 1934. xiv+331 pages; illustrations. Price, \$3.00. (East, West, North, and South; national parks, forests, seashore, ocean, lakes, even cities—all spread before you for your choice.)

Cronies. A Poetical Miscellany. By LEON J. RICHARDSON. The Sather Gate Bookshop, Berkeley. 1934. 75 pages. Price, \$1.50. (Short poems, including eight under title of "The Sierra." The translations from English into Latin are notable, especially Stevenson's "Requiem.")

⁶ *Alpine Pilgrimage.* By DR. JULIUS KUGY. Translated by H. E. G. Tyndale. John Murray, London. 1934. xxii+347 pages; illustrations, map. Price, 12 shillings.

